SERIAL Historical Collection

Columbia University
in the City of New York

College of Physicians and Surgeons

Library

MAR 29 1946 GMM

SERIAL

Historical Collection

Columbia University
in the City of New York

College of Physicians and Surgeons

Library

THE

NEW YORK

JOURNAL OF MEDICINE.

EDITED BY

STEPHEN SMITH, M.D.,

SURGEON TO BELLEVUE HOSPITAL.

VOL. VI.......THIRD SERIES.

NEW YORK:
BAILLIÈRE BROTHERS, 440 BROADWAY.
LONDON:—H. BAILLIÈRE, 219 REGENT STREET.
PARIS:—J. B. BAILLIÈRE ET FILS, RUE HAUTEFEUILLE.
MADRID:—C. BAILLY-BAILLIÈRE, CALLE DEL PRINCIPE.
1859.

W. H. TINSON, PRINTER, N. Y.

CONTENTS.—NO. I.

PART I.—ORIGINAL COMMUNICATIONS.

PAGE

Art. I.—Extracts from the Minutes of the New York Medical and Surgical Society, for the year 1858. Reported by T. Gaillard Thomas, M.D., ... 9

Art. II.—An Account of some Cases in Surgical Practice. By C. E. Isaacs, M.D., one of the Surgeons of the Brooklyn City Hospital, Consulting Surgeon to the Kings County Hospital, etc. etc., ... 32

Art. III.—Hip-joint Disease.—A Clinical Lecture delivered at the Long Island College Hospital of Brooklyn. By Louis Bauer, M.D., M.R.C.S. (England), Surgeon to the Hospital, etc. etc. etc., ... 39

Art. IV.—Post-mortem Appearances in Cholera Infantum, with Cases. By J. Lewis Smith, M.D., late physician to the Northwestern Dispensary, New York, ... 61

Art. V.—Extirpation of the Eye. By C. R. Agnew, M.D., Surgeon to the New York Eye Infirmary, ... 67

Art. VI.—Aneurism of the Femoral Artery, following a Popliteal Aneurism, cured by eight hours' mechanical compression. By E. J. Fountain, M.D., ... 75

Art. VII.—Report of the Proceedings of the Medical Societies and of the Practice of the Hospitals in New York; prepared for the New York Journal of Medicine. By George F. Shrady, M.D., Resident Surgeon to the New York Hospital, . 83

PART II.—CRITICAL ANALYSIS.

Art. VIII.—Critical Examination of all the recent Works relating to Infantile Pathology and Therapeutics; prepared for the New York Journal of Medicine. By A. Jacobi, M.D., Physician to the Children's Department of the (Canal street) German Dispensary of the city of New York, ... 108

BIBLIOGRAPHICAL NOTICES.

PAGE
ART. IX.—The Diagnosis of Surgical Cancer. By JOHN ZACHARIAH LAURENCE, F.R.C.S., ... 132
ART. X.—Of Nature and Art in the Cure of Disease. By SIR JOHN FORBES, M.D., D.C.L., F.R.S., Fellow of the Royal College of Physicians, etc., ... 134
Brief Expositions of Rational Medicine, to which is prefixed the Paradise of Doctors. A Fable. By JACOB BIGELOW, M.D., . 134
On Medicine and Medical Education : Three Lectures, with Notes and an Appendix. By W. T. GAIRDNER, M.D., Fellow of the Royal College of Physicians, Edinburgh, ... 134
ART. XI.—Selections from favorite Prescriptions of living American Practitioners. By HORACE GREEN, M.D., LL.D., . . 135
Proceedings of the American Pharmaceutical Association. Sixth and Seventh Annual Reports. 1857–1858, ... 135
Concentrated Organic Medicines ; being a Practical Exposition of the Therapeutics, Properties and Clinical Employment of the combined proximate Medical Constituents of Indigenous and Foreign Plants. By GROVER COE, M.D., ... 135
ART. XII.—Epilepsy and other Convulsive Affections, their Pathology and Treatment. By CHARLES BLAND RADCLIFFE, M.D., Physician to the Westminster Hospital, etc., ... 136

PART III.—MEDICAL RETROSPECT.

Report on the Progress of Obstetrical Science and Diseases of Women ; prepared for the NEW YORK JOURNAL OF MEDICINE. By E. NOEGGERATH, M.D., Physician to the Female Department of the (Canal street) German Dispensary of the City of New York, ... 137

CORRESPONDENCE.

Why do our Young Men go to Paris? 141
Report of Cases of Treatment of Curvature of Spine (continued). By J. A. WOOD, M.D., of Boston, ... 145

EDITORIAL.

Training of Idiots, ... 148
Medical Registration and Medical Peerages in England . . 149
To Readers, ... 150

THE NEW YORK JOURNAL OF MEDICINE

FOR JANUARY, 1859.

PART FIRST

ORIGINAL COMMUNICATIONS.

Art. I.—*Extracts from the Minutes of the New York Medical and Surgical Society, for the year* 1858. Reported by T. Gaillard Thomas, M.D., *Secretary.*

SURGICAL REPORTS.

Case 1.—*Tracheotomy for œdema of the larynx dependent on acute laryngitis*, by Dr. W. H. Van Buren. A lady aged 28, the mother of a child five months old, was the subject of the operation. She had formerly been an invalid, and had been thought to be suffering from albuminuria, but just previous to this attack was in good health, and quite fleshy.

About the 21st or 22d of February, she contracted an ordinary catarrh, accompanied by sore throat and glandular enlargement, which, however, attracted so little attention that she went to the Opera on Thursday night. During the performance, she felt some difficulty in breathing, and soon it became so disagreeable that she rose and left the house. Some delay occurred in the vestibule in getting her carriage, and by the time it arrived she was thoroughly chilled. When she reached home, the dyspnœa had increased, and she complained of an obstruction at the top of the larynx. Dr. Cock was then sent for, and in the morning was met by Dr. Bowen. Their efforts at relief, however, proved entirely ineffectual, and by midday they sent for Dr. Van Buren, supposing that tracheotomy was necessary. When seen by Dr. Van Buren, the dyspnœa was marked, the face livid, and the eyes protruding. There was some delirium apparently dependent on the unaërated state of the blood, and she was extremely restless, jumping from bed, tearing her gown open, and struggling violently for breath. Putting his finger into the throat to examine for œdema, which he suspected, he found the epiglottidean folds tumid and hard, presenting the feel of solid œdema, and appearing like two cylinders under the finger. To the eye, no diphtheritic deposit was discoverable about the fauces. Hoping to lessen the dyspnœa by scarification, he clipped the folds, and a little blood was expectorated, but without relief to the symptoms. Dr. Watts was now added to the consultation, and agreeing upon the propriety of tracheotomy, it was at once performed, the patient being put under the influence of chloroform.

When the trachea was opened, she appeared to be staggered by the sudden admission of air, the respiration became imperfect, then automatic, and then it ceased, leaving on the minds of those present the impression that the patient was moribund. This, however, soon passed off, and she was left that evening doing well, the pulse beating 108, and the respiration being easier.

One evil symptom, however, now appeared, namely dysphagia, which was so marked as to render it necessary to nourish her by enemata. On this day the parotid gland was found to be enlarged, appearing very much as it does in parotitis. It was painful to the touch, extended around the angle of the jaw, well over to the other side of the neck, but showed no signs of fluctuation.

On Saturday morning her condition was moderately good, but towards evening erysipelas attacked the wound. On the next day (Sunday) the double tracheotomy tube was exchanged for another which was single and of larger size, and which could be more easily kept in place. The folds of skin in the neck were now hard, and showed the extension of erysipelas to that part.

An unexpected complication in the shape of an abortion now came on. While at the water-closet, without previous premonition, an ovum nearly three months old was discharged, with considerable hemorrhage. The pulse now went up to 120, then to 130; she became gradually weaker, and on Wednesday last died. A short time previous to death she swallowed with some ease; twenty-four hours before this, the wound took on a sloughy, unhealthy look.

Dr. Van Buren's opinion was, that had not erysipelas and abortion complicated the operation, its results would have been different.

In connection with this case, Dr. Post mentioned one in which he had performed the same operation, under very similar circumstances, and in a post-mortem examination, found fibrinous effusion in the larynx, with points where suppuration had occurred.

Dr. Van Buren had, some years ago, a similar case in a sailor 25 years old, who had recently returned from a voyage, and was carried to St. Vincent's Hospital in very much the same state as the lady whose case has just been related. He was nearly suffocated, and was making violent efforts at inspiration, when tracheotomy was performed with entire relief, the tube being left in the larynx for seven or eight days.

Case 2.—Tracheotomy performed for œdema of the larynx, by Dr. Gurdon Buck. The patient, a strong, plethoric man, of full habit, with short neck, aged 56 years, was a resident in West Hoboken.

On Sunday night he exposed himself to cold and moisture, and on Monday had dyspnœa and symptoms which he regarded as those of a severe cold.

He sent for his physician, but he being engaged, did not see him until Tuesday, when he found him laboring under such violent symptoms that he desired a consultation, and Dr. Buck was called in on Wednesday at 7 P.M. When the doctor saw him, dyspnœa was great, there was a hoarse resonance in the cough which existed, and orthopnœa and dysphagia were present. The pulse was 108, and respiration 28. Scarification being deemed advisable, the finger was passed down to the epiglottis, which was found œdematous and curled upon itself, but the introduction of the knife was rendered impossible by the existence of swelling high up on the right side of the neck, which rendered the opening of the mouth impossible, and the finger could not consequently pass over the epiglottis.

Explaining to the patient the danger of delaying surgical aid too long in such a case, the doctor left him, advising the use of calomel and the inhalation of an infusion of hops, and desiring to be sent for in four hours should the respiration not be easier.

At one o'clock that night he was again called, and found the patient and family anxious for an operation to be instituted for his relief, and as his symptoms appeared in no wise to have abated in violence, it was performed. Cutting down upon the trachea just above the sternum, he without difficulty reached it, and had very little hemorrhage. Upon endeavoring to cut the rings, it was found that they were ossified, and great difficulty attended its accomplishment. With a pair of scissors, however, he succeeded in cutting out a triangular piece, and inserted a long tube into the opening. The dyspnœa was at once relieved, and the pulse soon fell from 104 to 98.

On the evening of the next day, the œdema had much diminished, and for some time the patient steadily improved, the only annoying symptom which was present being hiccough of rather an obstinate nature. Soon after this, however, bronchitis set in; pneumonia was established, and from the combined results of these he died, just one week from the time of the operation.

Case 3.—Tracheotomy performed for membraneous croup, by Dr. G. A. PETERS. Early on Monday morning, Dr. Peters received a note from the resident physician of the Nursery, requesting him to visit a case of croup then in the institution. Calling for Dr. Elliot, he went to the case in his company, and found a fine child of 17 months, sleeping with snoring inspirations in its nurse's arms. Upon being awoke, the respiration changed somewhat, and the child made some effort to throw its head back in breathing. Upon each tonsil a patch of false membrane about the size of a dime could be observed. It was determined to use large doses of calomel in the case, and accordingly ℨj. was directed to be given in the next twelve hours. Tuesday, 1 P.M., child had had one tar-like discharge from the bowels, giving the appearance of chopped spinach; the respiration was more croupy in its character, and the child was altogether not as well as at last note. The calomel was now stopped, and the developments of the case were watched. By nine o'clock that evening, four more passages occurred, in two of which calomel in substance was plainly traceable. The respiration was 50 or 60 to the minute, color and expression of eye good, but child distressed and restless. Beef tea and wine whey were ordered, and a prescription left for chlorate of potash gr. iv., carbonate of ammonia, gr. v., iodide of potassium, gr. iij., to be given at a dose, and repeated.

On the next day the little patient was worse, the face was dusky, the respiration 70, and the child restless. A consultation of the visiting staff of the hospital was now called and tracheotomy was determined upon, and performed at 11 A.M., of that day (Wednesday). The operation, which was performed in the usual way, presented nothing remarkable. Upon opening into the trachea the relief afforded to respiration was slight, but was more marked when the tube was introduced. After this the child coughed up a piece of false membrane, and what resembled false membrane in fluid form. On Wednesday night it slept for two and a quarter hours, very quietly and naturally, soon after which it coughed violently and in twenty minutes died.

In post-mortem examination the trachea and bronchial tubes to their last bifurcations were found filled with a grumous semifluid substance, resembling that coughed up through the tube, but only on the trachea could patches of consistent false membrane be discovered. The caput coli and vermiform appendage were found filled with lumbrici. The mucous membrane of the larynx was found inflamed.

Dr. Buck stated, in answer to questions involving those points, that he had once met with the peculiar expectoration resembling disintegrated false membrane in an adult female, upon whom tracheotomy was performed, and who subsequently showed symptoms of bronchitis; and 2d, that he had never seen a child as young as Dr. Peters' patient recover after tracheotomy.

Case 4.—Suppurative phlebitis dependent upon suppurative synovitis, by Dr. James R. Wood.—About two weeks ago, Dr. Wood was called to see a nervous, sprightly little girl, whom he found with these symptoms. She had had severe chills, the pulse was rapid, tongue dry, and great pain existed in one knee. Regarding the case as one of rheumatism, he prescribed a cathartic, directed a local application, and left her.

On the next day he found that although the pain in the knee had subsided, the case presented a much graver aspect. The child was delirious, although when spoken to she would for the time recover her consciousness and reply; had had several chills, the pulse was between 140 and 150, and the skin was cooler than natural. The swelling in the knee had subsided, but a small gland in the groin was now observed to be painful and swollen. He now considered the case as one of pyemia.

During the evening he saw her several times, and in one of these visits he observed that two of the knuckles were swollen and red, and that pain and swelling existed in one wrist. She slept little that night, and the next day sunk into a low typhoid state, and soon died.

In a post-mortem examination, pus was found in the joints of the knee, wrist and fingers, and Dr. Wood had little doubt, that it would have been found in some of the internal organs, had an examination of them been allowed.

Case 5.—Pyemia dependent on suppuration in the uterine veins, by Dr. James R. Wood.—About a fortnight ago Dr. Wood was called to see a patient, who had been delivered ten days previous, and had subsequently showed symptoms of endometritis, chills, fever, tenderness and vomiting. When seen by him, she was suffering from night sweats and hectic, with a pulse of 140, the skin dry and face flushed and anxious.

Physical examination of the chest revealed the existence of tubercles, but they were crude, had not softened, and she had little or no cough. Under these circumstances the diagnosis of pyemia was made, and Dr. Clark, who was soon after called in, agreed in it. In a short time a fullness was observable in one shoulder, which fluctuated, and upon incision pus was discharged. Pain and tenderness now appeared in one foot, and slowly travelled up the leg and thigh along the external and internal saphenous veins. The case is yet under treatment.

Dr. Wood requested the views of the society as to the treatment which they had found best in these cases. Dr. Van Buren stated that he had found the sulphate of quinine decidedly the most valuable means which he had tried for controlling the chills and fever; and Dr. Post stated that the only case of true suppurative phlebitis that he had ever seen recover, did so under large doses of it.

Dr. Wood then asked what had been the result of cases seen by gentlemen of the society, stating that those with which he had met, had been very fatal. Dr. Post had known of one recovery, as already stated, which owned for cause a gun-shot wound of the liver. Dr. Watson could recall one or two, and Dr. Halsted one, which had occurred in Dr. Buck's practice.

Case 6.—Operation for removal of loose cartilage from the knee joint, by Dr. T. M. MARKOE.—The patient was a servant of about middle age, and to all appearances a sound and healthy man. On the 25th December, as he was standing upon a step-ladder to fix some curtains, he fell to the floor and struck his knee, bruising it slightly. The bruise passed off in a day or two, but the pain continuing, on the 4th of January he consulted a physician, who made the diagnosis of loose cartilage in the knee joint, applied a bandage, and advised rest. Three weeks after this, he came under the treatment of Dr. Markoe, who found the joint very painful and inflamed, and upon examination detected a loose cartilage within it. He prescribed leeches, which were followed by blisters, and ordered the patient to keep the part perfectly quiet. This, in time, subdued the inflammation, though with some difficulty, and after it the patient was advised to wear an elastic knee-cap, and to use the joint with care. The cartilage was very movable and slipped about the joint. As it could, by the finger, be fixed on one side of the cavity, the Doctor essayed to keep it there by a compress, and cause adhesion; but in this he failed, and every now and then it would slip into the cavity and the patient would be suddenly caught by it as he moved the joint. Inflammatory action again showed itself, and he advised him to go to the City Hospital and be operated on for its removal. After his admission into the hospital, lotions were for ten days applied, so as to remove all traces of inflammatory action, the man being in the meantime kept perfectly quiet and not allowed to walk. On the 22d of April the operation was performed.

The cartilage being pressed to the extreme side of the joint, was firmly held by Dr. Buck in the *cul-de-sac* formed by the synovia at that point. It slipped once, but afterwards remained stationary under the pressure of the finger. Now introducing a tenotomy knife over the vastus externus muscle about three-quarters of an inch above the synovial reflection, the operator turning it as it passed downwards, made one or two sections of the synovial membrane and withdrew the instrument. This point of the operation was invested only with this difficulty, that it was difficult to determine that the synovial sac was opened into. The cartilage was now pressed towards the opening made, and with some difficulty it passed through it, and slipped under the vastus externus. Pressure being continued, it was forced as far as the point in the vastus externus where it is crossed by the rectus femoris, and here it was for the time left. No hemorrhage or thrombus followed the operation. Ice-water was applied to prevent them, for three hours, and then adhesive plaster was placed over the point of entrance of the knife.

On the fourth day after, the condition of the patient was excellent; there was a little tenderness along the course of the incision, however, and fearing lest inflammatory action might arise and involve the joint, leeches were applied over the sensitive part, and making an incision through the vastus externus, the cartilage was removed from under it. The inflammation did not affect the joint, all did well, and on May 15th the patient was discharged, with the advice to use the joint with caution for a while.

The body, which was now shown the Society, was shaped somewhat like a double-convex lens; the edges were cartilaginous, but the greater convexity bony. There were two parts of the operation, in which the operator thought that he had erred and in which he would act differently on another occasion; one of these was, making so small an opening through the synovial sack, that the body was forced out with some difficulty; and the second was, his having left it four days under the vastus externus muscle instead of having removed it earlier. Dr. Miller, in his work on Surgery, advises the removal of such bodies in two days, or at the most three; and Dr. Syme found that leaving it longer, caused suppurative action, which affected the joint.

Dr. Parker asked what the generally received view was, with regard to the pathology of these bodies.

Dr. Watson replied, that authorities differ with regard to them, those which form suddenly, as did that related by Dr. Markoe, are probably caused by the breaking off of small pieces of cartilage or bone, from the heads of the bones forming the joint, which are subsequently coated over, as a pearl is formed in an oyster, and the whole is rendered smooth by the movement and friction which it meets with, in the synovial cavity. For some time these may keep out of the way and not be discovered, then by some sudden movement, or while walking, they show themselves.

Dr. Markoe said, that they might arise from epithelial or fibrinous growth upon the synovia, which by a fall are broken off and thus appear suddenly. In the volume of the proceedings of the London Pathological Society for 1849, Mr. Solly, reporting a case of disease of the elbow joint, caused by one of these bodies, brought before the Society the views of Mr. Rainey on this subject, which are as follows: Those parts of the joint least exposed to pressure are covered with a very peculiar synovia. Loops of tortuous and complex capillaries, covered by synovial membranes forming villi or sacs, project into the joint. From these, or upon these as a base, other more vascular villi proceed, and thus there are sometimes several layers or series placed one upon the other. These fringes become sometimes the seat of a deposit of bony or fibro-cartilaginous material, which is rounded by the movements of the joint, becomes by accident broken from its attachment, and forms a loose and foreign body in the cavity.

Case 7.—Wound of the Scalp followed by serious results, by Dr. WILLARD PARKER.—The patient, a gentleman of 67 years of age, of active habits, and healthy robust constitution, was struck by a carriage one morning whilst crossing the street, and knocked down upon the pavement. He arose immediately and thought himself uninjured; but observing some blood upon his clothing, he thought it best to return home. He was seen two hours after the accident by Dr. Parker, who on examination detected a lacerated wound on the scalp an inch and a half in length and situated an inch above the external occipital protuberance. As there were no signs of concussion, the wound was closed by interrupted sutures, simple cold water dressing applied, and the patient advised to return to his business the following day if he felt able to do so. He accordingly went to his counting-room on the following morning, but while there was attacked with chilliness and vomiting, and obliged to return home at noon. Dr. Parker saw him soon after, and found him sitting up in a chair; the countenance was pallid, the surface cold; but there were no head symptoms. He was now ordered to keep perfectly quiet and in bed. Forty-eight hours following he was attacked with pain and swelling of the scalp—the swelling extending from the left ear to the right parietal bone, involving also the occipital region. There was some œdema, but little redness or heat; the pulse never rose above 100. Two days afterwards a fluctuating spot was observed one and a half inch in front of the wound; this was treated by a crucial incision, which gave exit to ℥ss. of thin pus. The wound during the next four or five days discharged large quantities of a thin serous fluid, and subsequently thick fœtid pus. At the end of eight or ten days the bone was found to be denuded, and shortly after a large slough came away about the size of the hand, consisting of the fascial and muscular tissues of the scalp. At this period also, several small openings occurred in the integuments, and the hair fell in large quantities.

The subsequent progress of the case was satisfactory; erysipelas of the face supervened on the separation of the sloughs, but subsided under the use of tonics and stimulants. After a while the discharge diminished in quantity, and the wound healed except in the situation of the exposed bone, which was now undergoing slight exfoliation. During his illness the patient was at times deaf and delirious, and there was also torpor of the intellectual faculties. These symptoms, however, had quite disappeared, and there seemed every prospect of his health being early and completely restored. Dr. Parker thought the case one of unusual severity, and expressed the opinion that the inflammation began under the pericranium. He was also surprised that so little exfoliation should have occurred.

Dr. Watson remarked, that the case was not an uncommon one; it was evidently an instance of sub-fascial abscess, and might, he thought, have been prevented if sutures had not been employed. He had so frequently seen mischief follow the use of sutures, in injuries of the scalp, that he made it a rule always to avoid them.

Dr. Parker thought this explanation unsatisfactory, as suppuration did not occur at first in the immediate vicinity of the wound, but at some distance from it. There was no evidence that in the present case, sutures had produced any evil results. Dr. Buck agreed with Dr. Parker, and stated that he had always been accustomed to resort to sutures in the treatment of scalp wounds, without ever having had reason to regret their employment. It was true that abscesses would occasionally follow, but so they would elsewhere, and he did not think that the accident ought to be regarded as a result of treatment. He was inclined to regard the case as one of unusual severity.

Dr. Post stated that in incised wounds of the scalp he had no fear of the use of sutures. Dr. Metcalf asked if the amount of disease was not very great to be followed by recovery. Dr.

Watson said no; he had seen the scalp puffed by pus like a Polish cap, and yet the patient recover. Dr. Parker said he thought he should have incised the scalp earlier. Dr. Watson agreed with him. Dr. Buck said that he had had a case as severe as that of Dr. Parker, which recovered without incision, and in which no slough occurred.

Case 8.—*Healing of the stump after amputation of the thigh, by first intention*, by DR. JOHN WATSON.—Dr. Watson operated on Thursday, four weeks ago, by the conical method, which he generally employs; the wound was closed by three sutures, by straps, and a roller-bandage. A small number of ligatures was employed—about six. The next day the wound was dry, and no change was made in the dressing, except the application of a cloth wet with cold water. Two days afterwards he again saw the patient, and found the wound dry still. On Sunday, eleven days after the operation, he saw him again, dressed the wound for the first time, and removed most of the ligatures; it was dry; no suppuration had occurred, and it had healed by first intention. He remarked that he had seen stumps of amputations practised on the leg and forearm heal thus, but this was the first case with which he had met where the thigh had done so. Wounds of this kind, said he, heal by first intention in general practice much more commonly than in that of the hospitals, where the vitiated air seems to prevent the process.

Case 9.—*Dislocation of both elbows*, by Dr. C. D. SMITH.—Dr. Smith wished to place on record a case of dislocation of both elbow joints, which occurred under the following circumstances: a boy 12 years of age was exercising in a gymnasium, and was endeavoring to perform a feat, consisting in swinging forward from a rope and leaping over a bar five feet in height. Having accomplished it twice, he made a third essay, failed, and falling forward, caught upon the ground on his elbows. The doctor saw him two hours after the accident, found the forearms pronated and slightly flexed, and both dislocated. The internal condyle of the humerus of each side was prominent, and the coronoid process rested against and under the posterior one. The child was brought under the influence of ether, and the reduction was readily accomplished.

Case 10.—*Virulent pustule*, by Dr. JOHN WATSON.—Dr. Watson was called to see a young English woman, servant in a family, who was suffering from one of those virulent pustules on the face commonly called malignant pustules. Three or four days before she had observed a small and slightly painful pimple upon the upper lip, which she had pricked with a needle. This seemed to aggravate it, and when the part was somewhat swollen, she had gone to a neighboring apothecary, who, with a lancet, had scarified the mucous membrane of the lip. When Dr. Watson saw her, there was considerable tumefaction about the part, extending to the angle of the lip and upwards towards the eye for two or three inches. The mucous membrane was corrugated, swollen, and nodulated, the pulse 120 to the minute, the tongue coated, and the swollen part quite painful. He now thought of making a free incision into it, but as it appeared to him that no sufficient indication existed for so doing, he ordered an evaporating lotion for the cheek, and gave internally spirits mindereri and solution of morphia.

This treatment was kept up for two days, with the result of producing diaphoresis and some sleep.

At the end of forty-eight hours, during which little change had occurred in the inflamed spot, he found on everting the lip points like detached pustules, similar to those showing themselves in anthrax, when about to break. He now made a free incision into the lip, which gave exit to blood and matter. The next day the pulse was higher, but she was evidently better, and in a week convalescence was fully established. The incision was undoubtedly of great benefit to her. This disease, he remarked, has not as yet been fully and accurately described; resembling anthrax in many respects, and the real pustule maligne in others, it differs in many particulars from both, and should not be confounded with them in description. The disease generally appears about the face, near the mouth, and is often fatal, and had been so in three cases which he had seen.

Dr. Parker agreed with Dr. Watson as to the essential difference between this species of virulent pustule and the pustule maligne of the French writers. It occurs, he believes, in the same persons and diseases in which we most commonly meet with paronychiæ, anthrax, and furuncle, to all of which it bears some resemblance. He had lost a case very similar to that mentioned by Dr. Watson. The incision should not, he thought, be deferred in these cases, but practised early, after which the treatment followed with most effect will be found to be that which is most soothing and supporting.

Dr. Post regarded the trouble as very similar to carbuncle, from which it differs only in the fact that it occurs in loose cellular tissue; he had seen the bite of a spider cause very much the same kind of inflammation, which was followed by gangrene. Dr. Watson remarked that anthrax presupposes always more or less sloughing of the surrounding tissues; this disease is not accompanied by it, and resembles more furuncle.

Dr. Buck had had in practice four cases of pustule maligne, of which three had died; the oldest of these was 50 or 60 years old, and the youngest 17. Two had shown themselves on the upper lip and cheek, one on the chin and lower lip, and one on the cheek near the mouth. The disease partakes, he thought, of anthrax and erysipelas, and the pustules mentioned in Dr. Watson's cases often show themselves at the place where the inflammation makes an apparent effort to point and discharge. The swollen part is, however, tawny and shining, not bright like erysipelas.

Dr. Van Buren had a case in a young married lady, which, commencing in a small pimple on the lower lip, ran a very rapid course, and destroyed life in forty-eight hours after he saw her.

MEDICAL REPORTS.

Case 1.—*Pneumo-thorax*, by Dr. A. CLARK.—Dr. Clark briefly related a case of sudden and unexpected perforation of the pleura. He was called into the country to see a gentleman who for six days had labored under difficult respiration, the performance of this function being so embarrassed that he was unable to lie down. He dated his illness back six days only, although he admitted that he had previously had slight hæmoptysis, and was noticed by his sister to be failing in strength. At the time above mentioned, while occupied in washing his hands, he suddenly felt an unusual, though not painful sensation in his side, breast-bone and epigastrium; this was soon followed by difficult breathing, and in three days after, by moderate expectoration of muco-purulent matter, such as usually comes from the bronchial tubes. His physician took his case to be one of congestion of the lungs, but had no opportunity of making a thorough physical examination. This, however, Dr. Clark was enabled to do, when he discovered the usual signs of pneumo-thorax, such as abnormal resonance or percussion, cavernous breathing and voice, and metallic tinkling. Dr. Clark thought that the perforation must have depended upon tubercular softening, but could not call to mind any other instance where the accident occurred so early in the disease. In five days after this date, the patient died.

Case 2.—*Emphysema from perforation of pleura*, by Dr. WILLARD PARKER.—The patient, an intelligent and refined lady, nearly 21 years of age, had suffered about two years ago from obstinate amenorrhœa which had impaired her health to such a degree, that she had, in hopes of relief, gone to Europe. After remaining there for a period of ten months, she was so much better as to be considered by her friends, cured; her menstrual function was reëstablished, she could take a considerable amount of exercise without fatigue, and her spirits were much improved. During her voyage homeward she menstruated, but after this period the discharge ceased, and although efforts were made by the physician whom she consulted upon her removal here to cause its return, it did not again appear.

In April last, Dr. Parker was called in to see her on account of this trouble, and a severe though not constant pain in the right ilium. This pain annoyed her a good deal, so much, in fact, as to lead the doctor to suspect the existence of some trouble about the spine, but a careful examination showed that none existed. He then attributed it to uterine or hysterical neuralgia, and made, in accordance with this view, a favorable prognosis, and advised tonic treatment, with exercise and fresh air. Actuated by religious motives, the patient, during the period of Lent, lived very abstemiously, and impaired her strength very much. After this, she began to sink; without any assignable cause, she emaciated steadily, and a very little exercise would exhaust her. She was now sent out of town to the seaside, and her strength for a time seemed to rally so that she was able to walk while there four or five miles in a day; but soon she began again to emaciate, lost appetite, and came back to the city about four weeks ago, looking very badly. She was then sent to Berkshire with the hope of benefit from the mountain air, but after remaining there for three weeks without improvement, she again returned to New York. She arrived here about ten days ago, very much debilitated, so much so that she had once or twice involuntary fæcal discharges. About a week after her arrival, while drinking a little brandy and water, she choked suddenly and coughed violently. A short time after this, the upper lid of the left eye was observed to be puffed, and soon after a similar puffiness of the parotid regions was noticed, in fact she perceived a fullness and crepitation there before the attention of any one else was called to it. She now gradually sunk and died.

The case, remarked Dr. Parker, was a peculiarly unsatisfactory one; no diagnosis was arrived at; although it was carefully investigated by Drs. Watts, Cammann, and other physicians, and even now, after the post-mortem had been made, he did not feel at all satisfied as to the efficient cause of death.

The *post-mortem examination* was made by Drs. Watts and Sands. The intercostal muscles were observed to be of a peculiarly florid color, the internal organs generally presented a dry appearance, and gave to the touch a pasty feel, as if greased; all the organs were healthy except the liver, which contained more than its normal amount of fat, and left lung, in which a small amount of tubercular matter was found. Near its apex the lung was attached by adhesion to the pleura, for about the space of a half dime, being free everywhere else. The left pleura, and a little of the right, were dissected up by emphysema, and air was found in the cellular tissue of the anterior mediastinum; it had likewise travelled upwards to the neck parotid regions, side of face and lid of left eye. Atheromatous degeneration of the aorta existed to a slight degree. Dr. Watts said that the extreme emaciation which had attended this case led him to look for stricture of the thoracic duct, such as he found in Calvin Edson, known as the living skeleton, but none existed. The source of the emphysema was evidently the point where the lung was attached to the costal pleura; a minute opening had occurred there, and the air prevented from entering the pleural sac by the firmness of the surrounding adhesion, escaped at once into the tissues external to that cavity. Even with this fact ascertained, however, it was difficult to say what had caused death, for the emphysema was not in itself sufficient, and it had occurred only towards the close of the case, which was undoubtedly tending, before its occurrence, to a fatal termination.

Cases 3 *and* 4.—*Diabetes*, by Dr. A. CLARK.—Dr. Clark called the attention of the members to the history of two cases of diabetes, in which he had resorted to a somewhat novel method of treatment with apparent benefit. The first case was that of a physician, aged 62, residing in the central part of the State of New York. He had naturally a robust constitution, and when in health had an average weight of 220 lbs. He stated that for the past forty years he had been actively engaged in the practice of his profession, and that he had enjoyed uninterrupted health until last spring, when his suspicions were excited by the occurrence of frequent micturition, accompanied with an increase in the amount of urine passed. He examined some of his urine, and detected the presence of sugar, fermentation taking place readily when the fluid was allowed to stand in a warm room. Its specific gravity was 103. Gradually he grew worse, muscular power being considerably diminished, and during the months of June and July the urine still continued saccharine, and increased in quantity to a gallon per diem. At this time his strength was overtaxed in attending the practice of another physician. He continued at work, however, until about three weeks ago, when his failing health induced him to abandon his practice, and come to New York for advice. He arrived here three weeks since, and consulted Dr. Clark. The quantity of urine passed at this time was about the same, as also its specific gravity, and chemical examination revealed the presence of a considerable amount of sugar. The fluid responded to the fermentation test in twelve hours, torulæ were formed in six hours, and the application of Trommer's test yielded a pretty abundant deposit of the red oxide of copper. Amongst the prominent symptoms were dryness of the mouth and skin, thirst, and constipation of the bowels, the fæces being unnaturally hard. In the management of his case, Dr. Clark was led, from the experience of a previous one, to advise the use of bi-carbonate of soda in doses of 11 grains, repeated as often as possible, provided the urine was not rendered alkaline, or the stomach nauseated. He also ordered counter irritation to be established at the back of the neck, the idea of doing this having been suggested by the experiments of Bernard, who was able to cause a diabetic state of the urine by irritating the medulla oblongata. A mixed diet was allowed, vegetables in moderation, and hard biscuit being included, and the patient was cautioned respecting the use of water, which was to be taken only at meal-times, and at no time freely. With these directions, he went into the country on the 31st of August, and remained until Wednesday of that week, when he again visited Dr. Clark. During the interval of absence a vast improvement had taken place. He could now sleep eight hours, and on rising, pass less than a pint of urine, the quantity passed daily not exceeding three pints. He complained no longer of thirst, his lassitude was gone, his bowels were natural, and his weight had increased 7 lbs.; his urine, when examined, was found to have a specific gravity of 102.20, and when subjected to Trommer's test, gave the black instead of the red oxide of copper. The absence of sugar was farther evidenced by the fact that the fluid was allowed to stand in a warm place over forty-eight hours without fermentation. Torulæ were likewise absent, and in their place was a moderate number of crystals and oxalate of lime. The patient was sent home to continue the same plan of treatment.

The *second case* was not as striking as the first, but yet was one of diabetes, treated in a similar way and with similar results. The patient was a gentleman who had once been under the care of Dr. Van Buren, and was seen by Dr. Clark two years ago. He then stated that he had suffered from the disease nine years previously, and that under the use of bi-carbonate of soda, he had recovered and remained well for more than six years. At the time he applied to Dr. Clark, he was passing about a gallon of urine daily, which, on examination, was found to contain sugar; he also suffered the usual symptoms of the disease. He was put upon bi-carb. soda, and a stimulating liniment, which, when rubbed upon the back of the neck, produced a sore that lasted for several weeks. During this period, he improved rapidly. Dr. Clark remarked that the results in these two cases were so satisfactory, that he thought himself warranted in recommending the same means of treatment for further trial.

At a subsequent meeting of the Society, Dr. Clark made a further report concerning the treatment of diabetes by blisters to the neck and administration of bi-carbonate of soda. Since the time of the last notes, he had had three cases, in which to test it. The first passed a gallon of urine a day, and used soda for three weeks without benefit. The stomach was disordered by it, and the patient unable to continue the treatment.

The second passed seven quarts a day of specific gravity 100.43—took soda for two and a half weeks, after which amount went up to eight quarts of specific gravity 100.4. This case left the hospital before treatment could be conducted to a close, or the remedy fairly tested.

The third case, which passed ten pints per diem under blisters and soda, did not improve at first, but the dose of soda, being carried up to ʒiiss. a day, the urine soon diminished in amount to six pints of specific gravity of 100.28. That day only two quarts had been passed, and he seemed improving.

Dr. Markoe stated that he had tried this treatment in a case of simple diuresis with very decided advantage. Under it the urine rapidly decreased from six to three quarts. No blisters were used.

Case 5.—*Hæmaturia*, by DR. B. W. MCCREADY.—Dr. McCready related the case of a gentleman of sixty years of age, to which he was called some time ago. On the night before the day on which he saw him, he stated that he had risen from bed, for the purpose of urinating, and noticed that the stream, instead of being steady, was jerking and irregular, as if checked by temporary resistance which it at once overcame.

The phenomenon was not a new one to him, and he at once suspected what he discovered upon examination to be true, that he was passing blood from the urethra, little clots of which every now and then encroached upon the integrity of its calibre. He soon had a chill, and before morning took some compound cathartic pills. In the morning the doctor found him sitting up, rather cheerful, with regular pulse. No urine had been passed since one o'clock on the previous night. The following was ascertained to be the previous history of the case. Seventeen years ago he had had an attack of hæmaturia, which had been repeated once since; he had never passed calculi; had suffered once from paralysis of the bladder which yielded to treatment; he seemed to have suffered from irritability of the bladder, having been in the habit of rising to urinate three or four times a night, for several years past. In the morning, Dr. McCready left the patient in the condition above described; at seven in the evening he was called to him again—found that he had passed no urine since, and that he was drowsy, stupid, and flighty. The pulse was not perceptible, and the face was pinched. Sinapisms were applied over the kidneys, and hot gin and water administered.

Dr. Metcalfe was then called in consultation. By this time the pulse had returned, and the patient was more sensible, though still drowsy and dull. Cups were applied over the kidneys, and croton oil administered. Just about 12 that night, he passed ℥iss. of bloody urine, and by the next day still more was passed. The mind was now clearer, the drowsiness seemed to be passing off, and by evening he was decidedly better. In three or four days he was so much improved as to be able to attend to his usual avocations.

The urine examined by Dr. Sands was found to contain blood globules, casts of the uriniferous tubes of the kidney, and epithelia of the ureters, kidneys and bladder. It was deep-colored and smoky in appearance. Dr. Watson asked where the blood in this case was supposed to have come from? Dr. McCready replied from the kidneys, as proved by the presence of casts of the uriniferous tubes, and the existence of comatose symptoms.

Dr. Watson thought that the lesion producing the flow of blood was probably disease of the prostate; he had seen just such hemorrhage from cancer of the bladder, and prostatic disease lasts for years. He had always found, too, that in venous hemorrhage, the blood appeared in the urine with very much the look of uric acid, and not in clots as when its source is the bladder or urethra. Dr. Metcalfe thought that there could be but little doubt as to the kidneys being the source of the loss in this case; he had seen a case in Bellevue, where hæmaturia had lasted for fifteen years, and upon post-mortem examination, a stone in the pelvis of the kidney was found to be the cause of the trouble. Besides this, he thought that in Dr. McCready's case, there were no symptoms of prostatic disease, the catheter having passed without difficulty.

As regarded the previous existence of paralysis of the bladder, Dr. Clark doubted the very possibility of such a disease without paralysis elsewhere; it generally occurs as a symptom of over-distension from stricture of the urethra, or disease of the prostate.

REPORTS ON OBSTETRICS AND DISEASES OF WOMEN.

Case 1.—*Cerebral apoplexy with uræmia at ninth month of pregnancy*, by Dr. T. M. Halsted.—The patient, a young lady of good standing in society, was in the ninth month of her first pregnancy. Of her previous history, it was stated that in 1850, she had an attack of articular rheumatism, which probably affected the pericardium; but since that time, she had had tolerably good health, and had suffered from no severe attack of illness.

On the 19th of June last, she became pregnant, or rather menstruated for the last time. During pregnancy she led an active life, ate freely, spent a good portion of her time in the open air, and became fatter than usual. She had, however, slight attacks of dyspnœa, the first of which occurred after she had fatigued herself by riding over a mountain, and the subsequent accessions of which came on, without assignable cause, in the night. One night she asked her husband to listen to her heart, stating that she felt faint, and that it was beating irregularly.

When Dr. Halsted saw her, she was complaining of headache, with a feeling of pressure on the head—the skin was cool and pulse 60. Examining for evidences of renal trouble, he ascertained that no œdema, pain in the back, or any other of its ordinary symptoms, were present. He now ordered the abstraction of ℥viij. of blood from the temples by cupping; but this increased the headache, and was followed by dizziness of vision and faintness; enemata, which brought away a small amount of fæcal matter, were then administered. After this she vomited two or three times, the last time about ℥ij. of green fluid. At 8 o'clock, P.M., the urine was examined and found to resemble, in color, beef tea, and to contain a large amount of albumen. The doctor explained the nature of the case to the family, and told them that he had fears of convulsions; but as labor had not commenced, and no symptoms of its immediate approach were present, he prepared at 9.20 to leave the patient for the night; just then he was called to her chamber, and found that in addition to the symptoms already enumerated, she was complaining of numbness of the left side of the body. She was at once put to bed, and very soon after, complete paralysis on that side came on. In a short time this became accompanied by stertor and coma, and in an hour death closed the scene. No post-mortem examination was made, but there could be no doubt of the case being one of cerebral apoplexy.

Case 2.—*Puerperal fever*, by Dr. A. DU BOIS.—The patient, aged 38 years, was on Saturday delivered of her fifth child. On Sunday evening she had a rigor, experienced pain in iliac regions and the pulse was up to 130. A dose of castor oil was administered, and after its action 15 grains of Dover's powder. On Monday morning Dr. Cock was called in counsel—agreed in the diagnosis of puerperal fever; and the following treatment: Leeches over uterus and 20 drops of Magendie's solution every two hours. On Wednesday the lochia and milk, which had ceased, reappeared and she had a distinct chill.

On Saturday, Dr. Clark saw her and gave an unfavorable prognosis. She had another chill at this date. A blister was now applied over the uterus, and opiate treatment continued. The solution of Magendie being given in doses of 10 drops every two hours, and alternated with tincture of veratrum viride in doses of 2 to 3 drops when the pulse became very rapid. The veratrum was given irregularly as the pulse needed control, and seemed to answer the end for which it was administered. This treatment was continued, and by March 20th the patient was sitting up, and to all appearances out of danger.

Case 3.—*Puerperal fever*, by Dr. J. T. Metcalfe.—The patient was a primipara aged 28 or 30 years, who after a tedious labor was delivered by the forceps. On the night following that of the delivery, the doctor was called to her at 1 o'clock A.M., and found that she was nauseated and had had a slight rigor. The pulse was 142, abdomen tender and face anxious. Dr. Delafield was called in and the treatment agreed upon was the application of leeches over the uterus, and administration of 15 drops of Magendie's solution every two hours until the pain was relieved. On the next day a blister was applied over the uterus, and tincture of veratrum viride, 8 drops every two hours, was given. This produced no effect—the respiration being hurried and pulse quick. Believing that the veratrum used was not of good quality, some of that prepared by Dr. Norwood was obtained, and administered in doses of 5 drops every two hours. In four hours (20 drops being by that time taken), alarming prostration occurred, the pulse went down to 68, and friction and stimulants had to be resorted to, to rouse her. The opiate treatment was now used only for the purpose of relieving pain, and the veratrum was continued in small and irregular doses. For twenty-four hours calomel and opium were administered, but were not continued. On the third day the milk disappeared and the lochia became scanty and very offensive. On the fourth day vomiting came on, the pulse fell, the skin became cool, and all the symptoms pointed to rapid dissolution. In the course of six hours, however, this condition, which appeared due to the obstinate vomiting, was relieved by the use of ice and minimum doses of prussic acid. Since that day she slowly though regularly improved, until two weeks from the time of attack, when a chill came on, the pulse mounted to 120, and great pain was experienced in hypogastrium. For nine days subsequent the pulse remained over 100, when an abscess discharged itself into the vagina, and the patient went on to recovery.

Cases 4 and 5.—Puerperal uræmia, by Dr. T. F. COCK.—Dr. Cock mentioned two cases of albuminuria in puerperal women, which he offered for contrast, and to show what preventive measures may accomplish in these cases.

To the first he was called late after labor had set in—delivered by version on account of convulsions, and patient and child died.

To the second he was called at the seventh month ; advised the patient of her condition, enjoined strict observance of hygienic rules, light diet, fresh air, and the use of saline cathartics, and to-night (March 20th) delivered her of a living child without an evil symptom.

Case 6.—Hysteria and Malingering, by Dr. WM. H. VAN BUREN.—While at Lake George during the past month, August, '58, Dr. Van Buren was requested by some of the inmates of his hotel to see a young woman, who it was stated had lived without food since the month of June, 1857. She resided in the neighborhood and had been visited by many persons, who believed in the authenticity of this statement, and some of them, among whom were clergymen and men of education, had given certificates to that effect. After a journey of eighteen miles he reached the place where she resided. There he met a physician of the neighborhood, and in company with him he proceeded to investigate the case. The house in which she lived was a small one, with two rooms on a floor, and through the partition between them, a small window had been cut to enable visitors to examine the woman, who was regarded as a curiosity. Upon looking through it, he saw a young woman lying upon a bed, apparently suffering from an ordinary but severe hysterical convulsion. Tonic spasm affected all the muscles, and opisthotonos existed in marked degree, so that she at times supported the weight of her whole body upon the occiput and heels. This condition seemed aggravated by their presence, and more particularly so when he entered the room and examined the heart by auscultation. She now sat up, threw herself violently about in bed; the whole body was shaken by clonic spasms and the respiration ceased for one-third of a minute. The convulsion was the worst he ever saw. The husband of the woman now asked them to leave the room, as she was made so much worse by their presence. After a while they returned, and the woman being more tranquil they were able to examine her more at length. The breath was found to be free from offensive odor, the teeth presented no appearance of sordes, and the complexion showed that hæmatosis and nutrition were well performed. The case was clearly one of exaggerated hysteria and malingering. Wishing however to assure himself and those who were with him still more perfectly, Dr. Van Buren passed his finger into the rectum and removed a mass of perfectly healthy fæces which was evidently quite recently formed. On the left side of the body scratches appeared, which were evidently the result of spasm in the arm of that side, although the husband declared that that arm had been maintained immovable across the abdomen for one year past. The husband further said, that this condition had followed parturition, his wife gradually ceasing to eat, until she absolutely subsisted without food. Sometimes he declared the breathing would entirely cease for fifty-two minutes. and with it the heart's action.

Case 7.—Post-partum hemorrhage, by Dr. A. C. Post.—The patient was a lady of 37 years of age, who had been married one year and was in labor with her first child. Four years ago she had had a polypus in the uterus, for which she underwent an operation which was only partially successful, as a portion of the growth still remained. For this she was again operated upon by Dr. Goddard of Philadelphia, and for some time all symptoms of its presence had disappeared. About three weeks ago Dr. Post was called to see her (she being then a little over the eighth month of pregnancy), on account of the expulsion of two clots of blood from the uterus. She was pale, her face was bloated, and her general appearance was not indicative of good health. Vaginal examination enabled him just to touch the os, which was very high up, and in it he felt a soft, spongy mass, the exact nature of which he could not ascertain, as he was not willing to introduce his entire hand into the vagina. Six days ago he was again called to her on account of slight hemorrhage, and on the next day the pains of labor came on. They began at 4—at 8 they were very active, powerful and continuous, like those produced by the administration of ergot; and under their influence the process of parturition was completed in one hour, that is, five hours from the occurrence of the first pains. As the placenta was expelled, there was a discharge of blood rather greater than usual, but not such as to excite any apprehension. The bandage was then firmly applied. Very soon the patient declared that blood was flowing freely from her, which upon examination was found to be true. Ice was then passed into the vagina and ʒj. of the tincture of ergot was given with a little brandy. The flow however still continued—ice was passed into the uterus, and brandy to the amount of half a pint given, but the stomach was so irritable that it would retain nothing. The patient grew gradually weaker until syncope and death occurred in about two hours after the commencement of hemorrhage. The existence of uræmia was suspected in this case, but no examination of the urine was made.

Case 8.—*Rupture of the uterus,* by Dr. A. CLARK.—On Friday a lady was taken with the pains of labor, the child presenting by the arm. Her attendant performed version; but found that after delivery of the body, he was unable to extract the head from the uterine cavity, within the neck of which it was contained. He sent for aid, and the physician who came performed craniotomy upon the retained head, and delivery was at once effected. The head was hydrocephalic to such an extent as to have prevented its exit from the pelvic passage. On the next day there was fever, the pulse ranging at 140; and the intestines had rapidly become tympanitic. She was put upon the calomel and opium treatment, purgatives having been given at its commencement.

Dr. Clark saw her on the fifth day of the disease, when the following was her condition: The pulse was 140; she was weak, though no marked indications of sinking were observable; there were no chills, no vomiting, no drawing up of the legs and no tenderness over the abdomen, which was still tympanitic.

The lochial and lacteal discharges were still present, and altogether it was very difficult to say whether or not the case was one of peritonitis.

In a short time, by the use of morphine and quinine the frequency of the pulse was reduced to 125, but the patient grew rapidly weaker; retaining consciousness to the last, she took leave of her family and friends, and in an hour and a half afterwards died.

On the day before her death profuse sweating and diarrhœa occurred, leading to the supposition of pyemia.

Upon making a post-mortem examination, no evidence of peritonitis was found. Upon the right side, filling up the right iliac fossa, there existed a large tumor, upon cutting into which one pound of coagulated blood was found. Upon the inner surface of the uterus, a coloring of pasty yellowish brown matter was effused, which the microscope proved to be pus and blood, showing unmistakably the existence of endometritis.

The uterine structure and appendages were found in healthy condition. On the right posterior surface of the cervix, a rupture running across was found, which was of sufficient size to admit two fingers. The fingers pushed onward through this opening touched the clot, which had been cast out of it. In the vagina, a little below the os, was found an ulcer, which penetrated the walls of that canal, allowing the recto-vaginal interspace to become filled with pus.

The tumor referred to above filled the right iliac fossa, and having dissected up the peritoneum, was covered by it in the same manner that the uterus is. The uterine veins, to the unaided eye, appeared perfectly free from pus, but the microscope revealed its presence, together with coagula of blood.

The explanation of the lesion, which to the mind of Dr. Clark suggested itself as most probable, was this—the enlarged head being drawn down upon the cervix, rupture took place at this point. Craniotomy being then performed, the head moved on under the influence of tractile efforts until it got below the ruptured spot, where for a time it rested. Hemorrhage having taken place, either from the ruptured vessels of the cervix, or from those of the placental surface, blood was collected in the uterus, which contracting, forced it against the head, which acted as a tampon. By this its flow externally was prevented, and consequently it was forced through the rent above, and collected in the iliac fossa, as already described.

The lochia were probably present for a day or two subsequent to the operation, but the idea of their continuance was an error, caused in all probability by the uterine discharges washing away parts of the clot which existed in the iliac fossa, and giving all the characters of the normal lochial flow.

Case 9.—*Ovarian tumor*, by Dr. G. T. Elliot.—A young woman who was convalescing from an attack of gonorrhœa, was suddenly startled by a noise in the house, and leaped quickly from her couch, when she instantly experienced the most severe pains in the pelvis, and was forced again to lie down. A physician was sent for, who, making a vaginal examination, discovered a globular tumor in the recto-vaginal interspace, and made a diagnosis of retroversion of the womb. In accordance with this view of the pathology of the case an effort was made to restore the dislocated organ to its place, but in vain; the tumor was entirely immovable.

Dr. Elliot was then sent for in consultation. Upon examination he discovered just what has been above described, and ascertained further, that the cellular tissue surrounding the tumor, gave to the touch none of that peculiar feel described by the French writers as "empâtement." The tumor was very distinct, and could be readily grasped by two fingers, inserted one into the rectum and the other into the vagina. It felt precisely as the fundus uteri would do in retroversion, and yet the impossibility of replacing it so soon after the accident seemed to controvert such a diagnosis. After a careful examination, he thought that the uterus appeared to be in its proper position, and this view was substantiated by passing a gum-elastic bougie into its cavity. The instrument passed up readily for a distance of three inches, in the direction of the proper uterine axis. The explanation which then suggested itself to his mind as covering the points of the case was this: a small ovarian cyst had been growing for some time in the usual position of such growths; when the patient jumped from bed, this cyst was thrown down, past the uterus, and was lodged in the space in which it was found. After some days, this tumor became extremely sensitive, chills occurred, and a profuse diarrhœa came on. The dejections were examined, and pus in large amounts was found in them. The great probability was, 'that the morbid growth had burst into the intestine. The case is still under treatment.

Art. II.—*An Account of some Cases in Surgical Practice.* By C. E. Isaacs, M.D., one of the Surgeons of the Brooklyn City Hospital, Consulting Surgeon to the Kings County Hospital, etc. etc.

Case 1.—*Disarticulation and exsection of the lateral half of the lower jaw, with the removal of the submaxillary and sublingual glands.*—M. R. laborer, age 45, of good constitution, in May, 1858, began to complain of pain in the two first molar teeth of the right side of the lower jaw. About the first of June, these teeth, which had then become quite loose, were extracted. A fungous bleeding mass rapidly appeared in the situation formerly occupied by the roots of the teeth, and continued to increase, gradually encroaching upon the surrounding parts. The patient consulted me in the early part of October. The disease was evidently cancerous, and involved not only a portion of the jaw, but also the submaxillary gland, and a small part of the mucous membrane of the mouth. A single enlarged lymphatic gland could be felt at the angle of the jaw. The integuments were apparently unaffected. Having obtained the opinion of several excellent surgeons, and which was in favor of an operation, I explained to the patient the true nature of his disease, and its certainly fatal termination unless removed—at the same time informing him of its great liability to return, but that the chance, although small, was yet the only one for his life. He readily assented, and on the 15th of October I proceeded to perform the operation. I was very kindly and ably assisted by Professor Wm. H. Van Buren and Dr. George C. Peters, of New York, and Dr. J. C. Hutchison, J. M. Minor, A. N. Bell and D. D. Kissam of the

Brooklyn City Hospital—Drs. Mason, McClellan, H. S. Smith, and several other physicians were present. The patient having been placed under the influence of chloroform by Dr. Peters, I made a curvilinear incision, commencing immediately over the articulation of the jaw, extending downwards to the angle, and from thence along the inferior border of the jaw to a point directly opposite the symphysis. The facial artery, where it turns over the inferior border of the jaw, was secured by two ligatures, and the vessel was then divided between them. The masseter muscle and other soft parts were then separated from the outer surface of the bone. The knife was now carried close along the inside of the bone, and the attachments of the mylohyoideus, and mucous membrane of the mouth, were separated. A central incisor tooth was now extracted, the chain-saw passed around the bone, and by the assistance of Dr. Peters, the jaw was sawn through near to the symphysis. The internal pterygoid muscle was next separated from the inner surface of the angle of the jaw—then the dental artery and nerve were divided. The jaw was now depressed so as to bring into view the insertion of the temporal muscle into the coronoid process, which was then cut through. The external pterygoid muscle was then cautiously separated from its attachment to the neck of the lower jaw—great care was taken to avoid wounding the internal maxillary artery, so that this vessel was untouched by the knife—the capsule of the joint was now opened, and the bone disarticulated. The jaw having been removed, the submaxillary gland, which was found to be diseased, was next cautiously insulated from the surrounding parts, partly by the edge, but mostly by the handle of the scalpel. Two or three large veins, passing from the inferior surface of the gland into the deep jugular, were securely ligatured before their division. It seemed to me, that the extirpation of this gland was attended with more difficulty and danger than the removal of the jaw itself. It was found necessary to remove about an inch and a half of the trunk of the gustatory nerve which was involved in the substance of the gland. I next dissected out the sublingual gland, two slightly enlarged lymphatic glands, a small portion of the side of the tongue, and removed every particle of the surrounding tissues, which appeared to be in the slightest degree contaminated by the disease. The hemorrhage was inconsiderable, amounting perhaps to six or seven ounces. The wound was dressed as usual, with sutures, adhesive strips, and a supporting bandage; and it was ascertained a few days after, that it had healed throughout a great portion of its extent, by the first intention. Since the operation (nearly two months ago) the progress of the case has been very satisfactory.

The wound has entirely healed. There is yet some soft swelling or rather puffiness of the cheek, which is gradually disappearing. The digestive, circulatory and other functions seem to be well performed. He is not able as yet to take solid food, but is at present confined to the use of soups, jellies, eggs, etc., etc. Although the result of the operation has thus far been nearly all that could have been desired—yet the well-known tendency of cancerous disease to recur, and its great extent, in this case, and consequently probable contamination of the system, render its return only too probable.

I may here also state, that I found on microscopical examination of the diseased tissues which had been removed, that they were filled with cells of various shapes and sizes, very many of which exhibited most indubitably every characteristic of true cancer; on the other hand, it may be mentioned that the patient, from whom I removed the lateral half of the lower jaw for *undoubted cancer*, on the 10th of June, 1855, is still living and in the enjoyment of excellent health—(See the NEW YORK JOURNAL OF MEDICINE for May, 1857). Although it seldom happens that we meet with so fortunate a result, as in the last named instance, yet in cases of cancer, it is not to be forgotten, that without the operation, there is no hope; that with it, the patient is at least relieved, for a considerable time, from the pain and disgusting annoyance of a most cruel and intractable disease—that life is sometimes prolonged, and *occasionally* saved. Finally, in such cases, may we not truly say, "anceps remedium potius quam nullum?"

Case 2.—Scirrhus of the testicle.—I was called on the 8th of June last to see Mr. ——, aged 35, and apparently of good constitution. He informed me that he had always been healthy until about four months previously, when he began to experience lancinating pains in the left testicle—that these pains gradually increased in severity, and that he had applied to a homœopathic practitioner, who had treated him for the last four months for hydrocele. He was, at the time I saw him, in great agony. The testicle was about three times its natural size—very hard, heavy, knobby, and irregular, on its surface—at one point, it was evidently softened. *There was no water in the tunica vaginalis, nor indeed in any part of the scrotum.*

I prescribed an anodyne, and recommended immediate extirpation of the organ, which I removed the next morning under chloroform. The testicle, when split open, was of the hardness and consistence of a turnip, creaked under the scalpel, and had a semi-transparent, and pearly, bluish white color; a portion of its interior was broken down, into a greyish and bloody pulp; abundance of cancer cells were seen under the microscope. The cord was apparently healthy. The patient was at once relieved of his tormenting pains, and the wound healed up, without any difficulty. The general condition was greatly improved. I ceased my attendance on the last of June. He remained apparently well until the sixth of August, when I was sent for, and found him complaining of severe lancinating pains in the small of the back. These were relieved by anodynes. The pains now occurred several times a day—gradually increasing in severity; various anodyne remedies were used, both internally and externally, with the effect merely of mitigating the symptoms. The paroxysms of pain continued to increase in intensity, affecting principally the left lumbar region, but not unfrequently, also, the great sciatic, and other nerves of the left lower extremity. Careful and repeated examination failed to discover any enlargement or swelling, either in the lumbar region, or in any part of the abdomen, or any tenderness on pressure; nor could any disease of the cord be detected. Nothing remarkable was found in the urine, after repeated microscopical examinations; many and thorough trials were made of the different narcotics, internally and externally applied, also of quinine, iodide of potassium, cupping, blistering, etc., etc. On the solicitation of the friends, other practitioners were called in consultation, and the remedies which they suggested were faithfully tried, with the same result. About the first of September, in answer to the anxious inquiries of the friends of the patients, I stated to them my firm conviction, that the same disease which had affected the testicle, had appeared in the kidney, or in some adjacent organ, and that I believed it would ere long destroy the life of the patient, and that nothing could be done except to mitigate the pain. I had several times previously intimated a similar opinion. The next day I was informed that my services were no longer required, and that another practitioner had been called in. I heard no more of the case until I was invited on the second of December, to attend the post-mortem examination, three months after I last saw the patient. Before opening the abdomen, I observed a large tumor, occupying nearly the greater part of the left side of that cavity. This was soon ascertained to be the left kidney, converted into a mass of encephaloid cancer, and weighing upwards of ten pounds. It was strongly adherent to the descending colon, to the ilium, the diaphragm, and especially to the ascending cava. No disease was ascertained to exist in any other organ. I was informed that the pains became more excruciating for some weeks before his decease, and continued to increase in intensity until death released him from his sufferings. I may here state that I had a case of encephaloid cancer of the testicle, during the last year. I removed the affected organ, but about two months afterwards the disease re-appeared apparently in the kidney, a tumor having been discovered in the lumbar region of the same side from which the testicle was removed. The symptoms were similar to those of the case just related. Unfortunately, no post-mortem could be obtained. In both these cases the reappearance and growth of the disease was remarkably rapid.

Case 3—Necrosis of a small portion of the compact substances of the femur.—Two months ago, I saw in Kings County Hospital, a male patient, aged 40, of rather feeble constitution, who had complained for six weeks previously of severe and aching pain (much more intense at night), a little below the junction of the lower with the middle third of the femur, and upon the inner side of the limb. Every remedy which had been used, either locally or internally, to remove this pain had entirely failed. On examination, I found a deep-seated swelling or enlargement, apparently immediately over the bone, and situated at the point complained of by the patient. It seemed to be rather less than the size of the longitudinal half of a hen's egg, moderately firm, or resisting, with considerable tenderness on pressure.

I immediately had the patient placed under chloroform. and made an incision about three inches long in the direction of the longitudinal axis of the thigh, through the skin and fascia, and over the part enlarged. The fibres of the vastus internus were divided, down to the periosteum, which was found to be very much thickened. On cutting through it, it was ascertained that a small spot on the surface of the femur, about as large as a ten cent piece, was denuded, roughened, black, and deprived of its vitality. A trephine just large enough to comprise a little more than the circumference of the diseased spot was applied, and a button of the compact substance of the femur was removed. About two-thirds of the substance of this button seemed to be dead; the remaining part was apparently healthy. No pus was observed to issue from the medullary cavity, but blood escaped freely. The disease appeared to be limited entirely to the portion removed. The parts were brought together, and the usual dressing applied. Everything progressed favorably. The wound has now healed, and the patient has been completely free from pain since the operation.

Case 4.—Radical cure of hernia.—Maurice White, seaman, aged 60, a native of England, of good constitution, was admitted into the Brooklyn City Hospital, on the 21st July, 1858. Fourteen days previously was struck by a bolt, while on board ship, in the right inguinal region, and since then has had slight pain in the track of the inguinal canal of that side. On examination there was found enlargement of the internal and external rings. On coughing, the intestine descends along the canal, and protrudes at the external ring. On the 22d of September, I operated upon the patient for the radical cure of hernia, with the instrument, and by the method of Dr. Riggs. The patient had very little pain from the operation, but had considerable during the afternoon, and very much the next night. On the 24th, there was still some pain, with slight chilly sen sations, but on febrile disturbance.

Oct. 19th.—Walks about without any difficulty—wears a truss. The operation seems to have been entirely successful.

Oct. 29th.—Discharged cured.

Case 5.— Varicocele treated by excision of a portion of the scrotum.—Thomas McDonald, seaman, aged 23, admitted into the Brooklyn City Hospital, for gleet, September 6th, 1858; says he has been always healthy, but has marks of strumous disease, which he says he had in his infancy; has had gonorrhea several times, and probably syphilis. He has varicocele of the left side, of which he is anxious to be relieved. On the 26th October, he was placed under the influence of a mixture of chloroform and ether, and I proceeded to remove a large portion of the scrotum, according to the method of Sir A. Cooper. A sufficiently large part of the scrotum having been passed or drawn through the semicircular steel clamp, was removed by the knife. The clamp being then taken away, a very large bleeding surface was exposed. *All possible caution was observed to tie every bleeding point—whether arterial or venus.* It was noticed that the hemorrhage was very free, although not excessively so—some small portions of bleeding surface, from which a capillary oozing would obstinately persist, were touched with the solution of persulphate of iron, which instantly arrested the hemorrhage. The wound was kept open for a considerable time, and sufficiently long to feel assured that all bleeding had entirely ceased, and that every source of hemorrhage had been secured, so far as it was possible to ascertain, by most careful and repeated examinations. The wound was then closed by interrupted sutures, and water dressing was applied with a suspensory bandage.

On the next day about twenty hours after the operation, hemorrhage occurred from the wound, and it was noticed that there was great extravasation. I immediately had the patient put under the influence of chloroform, took out the sutures, opened the wound, and removed a clot of blood as large as a turkey's egg, and tied a number of small points from which blood was oozing. I could discover no small arteries from which the bleeding proceeded. Some of the bleeding surfaces were touched with the solution of the persulphate of iron. The patient was chilly and prostrated after this operation; but about six hours after, strong febrile reaction occurred. On the 28th, tongue coated, skin hot and dry; considerable extravasation of blood was noticed, but no external hemorrhage. 29th.—Suppuration going on. 30th.—*Some sloughing of the edges* of the wound—considerable epistaxis. The sutures have nearly all cut through, so that the testes are protruding; *slight hemorrhage* from the parts. 31st.—*Scrotum still sloughing*—general symptoms unfavorable, sleeps poorly, mind wandering, etc. Is taking wine whey, quinine, etc., etc., and nutritious diet.

10th November.—Wound is granulating nicely. 23d.—Pulse 120 and feeble, tongue warm and coated, prostration, headache, peculiar rose-colored eruption on the body and extremities, scrotum still granulating. 25th.—Great prostration, pulse 120 and feeble, voice tremulous, all the symptoms worse; quinine, whisky and milk-punch, etc., etc. These symptoms continued until the 29th when he began to improve and continued to do so.

December 8th.—Has continued to improve for the last four or five days, has been walking about the yard, scrotum has healed with the exception of a place about the size of a dime. On visiting the wards this morning, found that he had taken his departure, "*alias*" run away. I have condensed the account of this case (omitting many details) from the very complete and carefully taken notes of Dr. Tinsley, house-surgeon to the hospital. The history would, I think, show some objections to the operative process pursued in this instance. I may previously allude to the dependent position of the scrotum, and its very great vascularity, and consequent great susceptibility to secondary hemorrhage after the operations usually performed upon it. In the first place, in this operation for varicocele, after a large portion of the scrotum is removed, it is necessary to expose a large vascular and nervous surface to the contact of the air, and necessarily to much rude handling for a considerable length of time, in order to secure the bleeding vessels. But this cannot be done, even under chloroform, without producing a serious shock, which is apt to be severely felt afterwards. Secondly, we can never be certain, after all our precautions in securing the vessels, that hemorrhage will not occur. At the time the large flap of scrotum is removed, myriads of minute vessels are laid bare, which rapidly retract and contract, and only commence bleeding after the wound is dressed, and reaction has occurred. If, on the contrary, all the *visible* bleeding vessels are tied, and the patient is sent to bed, with the wound still open in order to secure any vessel, which may bleed several hours afterwards, this plan is also open to the objection of producing pain, great shock and constitutional irritation. If after all our pains in ligaturing the vessels, we are nevertheless obliged to reopen the wound, we expose the patient to great additional suffering, increased shock, the danger of gangrene, as seen in the present instance, while the exposure of a large denuded surface over the testes adds immensely to the irritation and prostration of the whole system. It will probably be said that a great number of cases have been operated upon without these accidents. This is undoubtedly true; but the arguments already adduced show, that we can never feel *secure* in any case, that these unpleasant and even dangerous complications may not occur. Is it right in such a disease as varicocele, which is often merely an inconvenience, to subject a patient to the risk of so much suffering and danger? *Can we not devise a better operation?*

Art. III.—*Hip-joint Disease.—A Clinical Lecture delivered at the Long Island College Hospital of Brooklyn.* By Louis Bauer, M.D., M.R.C.S. (England), Surgeon to the Hospital, etc. etc. etc.

Gentlemen: Numerous cases of hip disease presented at our hospital and polyclinic, have given ample opportunities of inquiring into its pathology, and of testing the efficiency of our treatment. You have seen the disease in all its phases and complications, from its local commencement to its constitutional termination; you have therefore collected sufficient clinical facts to review some important points intimately connected with our subject. Most cases being still in your recollection, we may dispense with the reiteration of their respective histories; nor need we enter upon details, you being fully conversant with the substance of the subject. Deviations in our present opinions from those propagated some years ago, you will readily recognize as the result of continuous investigation and augmented clinical experience. Looking upon stubborn facts as the only reliable and commanding authority within the compass of inductive science, and claiming no personal infallibility, we shall occupy no time in needless vindication.

Passing over the first stage of hip-joint disease, as not arresting our attention in particular, we may at once proceed to investigate the characteristic phenomena of the succeeding period. As such we have to mention:

1. Immobility of the affected joint.
2. Malposition of the affected extremity.

3. Attenuation of the affected extremity.
4. The peculiar pain.

1. *Immobility of the affected joint.*—The second stage is, so to speak, initiated by this symptom. In the beginning the immobility may not be perfect and in a certain measure be attributed to volition, yet it very soon becomes obvious that all use of the joint has ceased, and that it has passed beyond the control of the patient. This becomes evident in the act of locomotion, in which the patient substitutes the healthy articulation conjointly with the flexibility of the spinal column, more especially that of the lumbar portion, and they gradually acquire by constant practice such a facility as to delude not only their parents, but even their medical attendants. The true condition, however, will be easily ascertained, when the patient is undressed and moving about; that is, he moves his pelvis in toto and not his limb separately.

In order to test the part volition may have in the performance, we need but to place our patient under the influence of chloroform, when it will become evident that both abduction and adduction are impossible, and that but a moderate flexion and commensurate extension are practicable.

2. *Malposition of the affected extremity.*—In the same proportion as the joint is losing its mobility, limb and pelvis assume a very characteristic malposition; the former becoming *flexed* in both hip and knee-joint, and, at the same time, *inverted* and *abducted;* the latter *oblique*, *projected* and turned around its transverse diameter, diminishing its angle of inclination with the horizon.

That these relations are no fictions, but realities, we have repeatedly shown to you with mathematical precision. In placing your patient in the erect posture and dropping a plummet line from the 7th cervical spinous process, and in drawing a line from the ant. sup. spinous process of the ilium to that of the other side, we recognize the declivity of the pelvis in the following facts:

a. Ant. sup. spinous process of ilium stands lower on the affected side; both lines form an obtuse angle instead of a right.

b. The plummet line should fall parallel and in the rima inter nates, yet the latter is oblique and its continuation crosses the former in an acute angle.

c. The inferior circumference of the nates on the affected side is lower than the other.

d. There is a simple curvature of the spine with elevation of the one shoulder (affected side).

The flattening of the nates (affected side) has been mentioned as a great pathognomonic sign, yet you will easily understand that it is a mere subordinate, depending chiefly on abduction, but in part on the general attenuation of the limb. The same may be said as to the apparent elongation of the extremity—which is of course the inevitable effect of the obliquity of the pelvis and the abduction of the affected member, and in connection with which the patient assumes a very peculiar walk. He places first his affected extremity forward and outward on the ground, and draws his adducted healthy limb quickly after, shoulder and pelvis (affected side) projecting, so that his walk is actually diagonal.

The question as to the pathological condition of the joint giving rise to the articular immobility and the stated malpositions, is of no ordinary interest, both in a scientific and practical point of view.

Many hypotheses have been advanced, to explain the proximate cause of these symptoms and by men justly esteemed both as practical surgeons and scholars. Yet the confusion and uncertainty seemed to increase with the number of theories until Rust precipitated the vexatious question in his usual dogmatic manner, by cutting the Gordian knot. To review all the hypotheses which have been started from Sabatier up to our time would be of little practical value; they have passed away, and it is but desirable that oblivion should cover the errors of our ancestors. For our age it has been reserved to relieve hip-joint disease from the incubus of individual authority, and to study it anew on the basis of pathological anatomy and stubborn clinical facts.

To Sir Benj. Brodie, is due the merit of having opened the first breach. He not only aided in clearing the road of progress from the rubbish of speculation and fiction, he also taught us to return from the green-room to the dissecting tables and to resume the patient and watchful observation at the bed-side. The inquiry once started has been kept alive ever since, and the united efforts of zealous students have opened fair prospects of exact knowledge on this hitherto so obscure subject.

The chief cause of error has evidently been the supposition of a *true* elongation where but an *apparent* one existed; an idea of which but few authors could free themselves. Since Godichen, however, has clearly proved this fact, we shall soon come to a general understanding of those mechanical principles that influence the malposition.

In repeating the interesting experiments of Prof. G. Weber, upon the hip-joint, some few years ago, the analogy of position produced by artificial injection, with that presented by the femur in the second stage, was so striking as to justify the conjecture of equal cause. The conjecture was diligently followed up in our clinical observations and we are gratified in stating that their correctness was subsequently affirmed by facts of indisputable evidence. At first we concentrated our attention upon discerning the presence of fluctuation; indeed, no easy task, the hip-joint being surrounded and covered with muscles, tendons and strong fasciæ. But the attenuation of these parts facilitated our object more than we originally expected. We preferred, moreover, those cases in which the malposition and the supposed effusion was greatest. In fine, we placed our patients under chloroform for such examinations in order to render them both painless and more simple. Thus we succeeded in discriminating the presence of liquid along the posterior circumference of the acetabulum, which you have had opportunities of confirming repeatedly. We then went a step farther, in carefully entering the fluctuating joint with a trocar by a valvular opening and *withdrew more or less liquid*, as the case might be. This proceeding, no doubt, will be denounced by some surgeons as reckless and hazardous, but that their fear is totally unfounded (provided it is done to the exclusion of atmospheric air), you can bear testimony. Boyer, Goyrand, and other surgeons, had performed the operation upon the knee-joint with good success, before we ventured upon puncturing the hip-joint. Suffice it to say, that immediately after the withdrawal of the liquid from the affected joint, the limb could be moved in any direction, *provided that no muscular contractions were present*, and its previous flexed position altered at pleasure. We have thus conclusively proven that the effusion, serous, plastic or purulent, is the proximate and only cause both of the malposition of the affected extremity and the immobility of the joint.

As to the declivity of the pelvis, it can be easily shown that it is but a mechanical sequel of the malposition of the extremity. For if the patient sits down he will always manage to keep the affected side from the chair and place his extremity in a position of abduction. Having done so, the pelvis rests with both tubera ischii on the seat, the spinous processes of the ilium occupy the same height and the curve of the spinal column disappears.

3. *Attenuation of the extremity.*—Attenuation of the extremity is an ordinary sign of hip-joint disease, but not the less characteristic. We see it at the very beginning of the malady and through all its phases. A few weeks will suffice to reduce the circumference of the affected extremity more than 20 per cent. To account for it by supposing want of exercise, or by suppuration, is a vain attempt, since not every patient abstains

from his usual walks or ramblings; and not every hip-joint disease is suppurative. Nor would one or the other limit its morbid effects exclusively to the affected extremity. We have, therefore, to look for another interpretation more feasible and rational than the former.

The sudden waste of a single muscle, muscular group or an extremity to the exclusion of other parts of the body, finds no other analogy in pathology than in morbid reflex action. Wry-neck, club-foot or hand, talipes equinus and other deformities, verify the correctness of our views. And in further exemplification, we beg to adduce the following case, that will show the rapidity with which the attenuation may be accomplished.

An Irish laborer received a stab in his back with a dirk near the spine. From the fact that his friends had some difficulty in extracting the blade, which was firmly fixed, we are justified to infer, that it had entered bony structure. The wound subsequently healed up without any untoward symptom. After the lapse of six weeks, the patient experienced some painful and drawing sensations in one of his calves, which grew in intensity, drawing up the gastrocnemius and soleus muscles, ultimately producing a complete talipes equinus. When the patient soon after came under our care for operation, the circumference of his leg had considerably diminished, so as to bear no comparison with its fellow.

Reflex-action occurs in hip disease in both spheres of the diastaltic system, and manifests itself in retraction of muscles and pain. The former is not as prominent in the second stage as the latter, and we shall therefore consider it more particularly with the third stage of the malady. We proceed to

4. *The peculiar pain.*—A careful clinical observation will readily discriminate two kinds of pain in the second stage of the disease. One that appertains to the joint itself, which is directly connected with the inflammatory and disintegrating condition of the various tissues constituting the articular apparatus. This pain is fixed and unalterable; it varies between the sensation of soreness to a most painful heat, tension and pulsation; it is modified by the progress and regress of the lesion, and is readily perceived by pressure upon the diseased joint and the accidental or intentional motion of the extremity; in one word, it is the attribute of inflammation of the parts themselves, and therefore no subject of special remark. The other pain is of a very different nature, and clinically, not as yet deservedly appreciated. That pain prevails during night, is of an intermittent type, with free intermission, appears with the swiftness of lightning, and seems to terminate near the knee-joint, lasting scarcely long enough to produce a clear per-

ception on the part of the patient or to awaken him to full consciousness.

Nevertheless, when that pain sets in, he will scream out terrifically, and instinctively grasp his knee. The sound thus uttered is as characteristic to this lesion as the peculiar sound in diphtheritic croup; it is indeed most intense, and so loud as to indicate the great agony of the patient. And yet, if you wake him, he can scarcely remember it, and if not disturbed, he will sink back upon his pillow and resume sleep. During the day, and while awake, he is perfectly free from it; but as soon as night and sleep commences, it will again make its appearance, and last throughout the night. Unless the surgeon has the patient under his own roof, or watches his cases during night-time, he has but rarely the opportunity of observing this symptom in its peculiarity and character, and it is, therefore, erroneously confounded with the ordinary pain accompanying the inflammation of any organ, modified only by the amount of nervous supply.

That this pain is of a reflected character and stands in close connection with the collaterally existing retraction of muscles, can be satisfactorily proven by the division of the latter, which not only removes the pain we have just alluded to, but also arrests the progressive attenuation of the extremity at large, and leads to better nutrition. You have repeatedly observed those effects of myotomy; *they are facts* and no hypotheses. But we shall have to recur to this subject under the head of treatment.

The disease may terminate at this stage of development, in which case the inflammation will gradually decrease, and the effused plastic material organize to fibrous tissue, connecting more or less the corresponding articular surfaces, and leaving spurious anchylosis. The entire resorption of the fluid, although by no means impossible, is in our opinion a rare issue. If it takes place, it allows the supposition that the effused material is of a decided low character, with little or no blastema. And the fatty degeneration of purulent effusion and subsequent resorption is still less to be entertained, as the formation of pus is most usually the result of ulceration of some of the articular tissues.

If, however, the disease steadily advances, all symptoms increase in violence, and the augmented effusion at last perforates either the capsular apparatus or the acetabulum itself. The latter may be apprehended when caries of the acetabulum and ulceration of the lig. teres has been achieved by the disease. The exploratory puncture of the joint and the microscopical examination of its abstracted contents, are excellent auxiliaries in determining diagnosis. The presence of pus, the looseness of the articulation, and in fine, the crepital sound on moving, are the most reliable evidences of those conditions Should the purulent matter emanate through an opening of the capsule, it will lead to the formation of consecutive abscess, the seat of which will of course depend on the location of the former. Posterior perforation locates the abscess either on the posterior or external surface of the thigh, the matter descending below the large glutæus muscle, and collecting more or less below the large trochanter. As all collections of this kind are subfacial, they are by necessity diffuse. In rare instances the matter perforates the joint anteriorly, and in rising, it may destroy the periosteum in its way, follow the course of the iliaco-psoas muscles, and form an abscess anteriorly or internally of the thigh. The matter having perforated the acetabulum, most usually ascends and subsequently appears under Poupart's ligament, which may lead to the presumption of psoas abscess.

Very different are the effects in case of perforation, when the effusion is of an organizable constitution. No abscess will ensue, it will be in part absorbed or converted into fibrous tissue, gluing together the muscles, between which it is intersected.

At this juncture, the third stage of the disease commences, and its concomitant symptoms are, comparatively speaking, almost reversed. In order to show the differences existing between the second and third stage, we shall mention them in connection.

SECOND STAGE.	THIRD STAGE.
Limb (apparently) longer.	Limb (apparently) shorter.
" abducted.	" adducted.
" everted.	" inverted.
" flexed in both joints.	" flexed in *hip-joint only.*
Foot touches the ground with sole.	Foot touches with ball only.
Toes everted (as in fracture of neck).	Toes inverted as in post. sup. luxation.

Pelvis oblique, in either stage, but in reversed position on the affected side.

SECOND STAGE.	THIRD STAGE.
Pelvis lowered.	Pelvis raised.
" projected forward.	" projected backward.
" angle of inclination acute.	" angle of inclination almost right.
Nates low and flat.	Nates high and round.
Linea inter nates inclined towards affected side.	Linea inter nates deviates from affected side.
Spine on the affected side curved.	Spine on affected side concave.
Pain most intense.	Pain greatly diminished.

Whilst the perforation of the walls and the termination of hydraulic pressure (at least to our mind) satisfactorily explains the change of symptoms in one point, it still leaves the question open for discussion, by what means the new malposition of the affected member may be acquired. The old school has an answer in readiness, viz., "spontaneous dislocation." But ten years ago, ostracism and contemptible sneer would have been the inevitable lot of a surgeon who dared to doubt the doctrine that had been generally received as a settled truth. Happily, the time when individual authority was permitted to convert fiction and hypotheses into facts by abstract arguments and dictation has passed by, and we imagine never to return. But the number of adherents to that obsolete and fictitious doctrine is yet respectable, and we may, therefore, be of some service to the cause of truth, in discussing more fully the question of spontaneous dislocation, than we otherwise might have desired. We have two ways of doing so, first in clearly demonstrating the error, and second in bringing forth the facts in positive proof of modern teachings.

The doctrines of the late Prof. Rust on this subject were exceedingly plausible, and as his disciple, we were fully initiated in them, and defended them with ardor whenever an occasion might offer itself. What was simpler than enlargement of the caput femoris as a cause of elongation, and what more conclusive than a final escape of a bone that had no more room in its respective socket? And allowing the margin of the acetabulum to be carious, soft and destroyed, and the muscles retracting, we had all the premises for spontaneous dislocation. The convexity of the nates, the inversion and shortening of the extremity, left no further doubts. The scale of argument turns, however, very soon, in establishing the fact that effusion into the articular cavity and hydraulic pressure upon the femoral head are recognized as causes of elongation. Thus the premises are effectually removed, and the inference rests on no foundation. But supposing, for the sake of argument, the femoral head to be enlarged either by tuberculous deposit or central caries (myeclo-ostitis), it would of course ulcerate and destroy the lig. teres, and likewise soften, flatten and mould itself to the acetabulum, but in no way elongate the member; or it would not ulcerate, and in this case, the mere integrity of the lig. teres would effectually prevent its being dislocated. This, however, refers but to the preceding period, and not to that in which the extremity has already assumed a position simulating dislocation.

Judging from the numerous victims of hip disease found in our public thoroughfares, cases of so-called spontaneous dislocation are, unfortunately, frequent enough. Yet in searching anatomico-pathological collections, specimens of that description are rather scanty. The several pathological museums of London, the Hunterian included, have but comparatively a few presenting the conjoint evidences of both hip disease and dislocation upon the ilium, and in the United States we may almost enumerate them, so insignificant is their number. Prof. Gibson, formerly of Pennsylvania University, had the kindness to show us quite a number of specimens, referring to hip-joint disease, and there was but *one* dislocation, and even that showed no traces of hip disease. That it had been the result of morb. coxarius, we have no doubt, since we have the word of the venerable Nestor of surgery for it. Our distinguished friend Prof. Mussey, is in the possession of one of the best and most complete collection of specimens, yet there is among them but one that could be accepted in favor of dislocation after hip disease. A third was shown to us at St. Louis, by Prof. Pope, said to be taken from a patient suffering both from hip disease and typhoid, in the course of which dislocation took place, without any traumatic cause whatever. Thus much for pathological anatomy. Rust himself, however, has never laid before the profession any evidence sufficiently strong to carry his point. At any rate, the three cases he adverts to in his work on "Arthrocacology"* have not, and never could be admitted as the basis of his doctrine. In a girl twelve years of age, suffering from coxalgia of the 1st degree, and who had died from pulmonary tuberculosis, he remarks: "I found the head of the femur expanded, deeply pressed down, and in part out of the acetabulum. The two other cases only represent caries of the neck, one with a flattened head without enlargement, the other entirely separated from it, but retained in the socket. The theory of spontaneous dislocation is essentially based upon the supposition of caries of head and acetabulum, yet a large proportion of hip-joint disease, with high and even the highest degree of malposition and shortening, has never advanced to caries. Again, in applying Nélaton's test, by drawing a cord from the tuber ischii to the sup. spin. process of the ilium we usually cross the very apex of the large trochanter, which should stand far above if dislocation had taken place. Moreover, the average shortening of traumatic dislocation upon the ilium (sup. post. dislocation), is one and a half inches, whereas the average shortening in the third stage of hip disease, the supposed spontaneous dislocation is at least three inches. Are we to believe that a muscle has a greater effect than external violence upon a perfectly healthy and well-secured joint? But, gentlemen, we feel it incumbent upon us to arrest here our criticism, and to proceed at once to the positive proofs of a different interpretation for the malposition and shortening. We do not, however, wish to be understood, that we altogether negative the possibility of dislocation of the femur in morb. coxarius, for this would be folly in the face of indisputable facts. For, if a healthy femur may be dislocated, decidedly an affected one can, when the anatomical conditions are every way more favorable. All we wish to say is—

---

* *Arthrocacology, oder die Verrenkungen durch innere Bedingungen.* Wien, 1817, pag. 17.

1. That dislocation, consequent upon hip-joint disease, is not by the hundredth part as frequent as presumed, and
2. That dislocation cannot take place without additional traumatic cause, however trifling, which in our opinion dissolves the ontologism of the term "spontaneous dislocation."

How rarely, even under the most advantageous circumstances, dislocations occur in this malady, the case, which we have published in the New York Journal of Medicine (vol. xii., new series), and to which we invite your attention, will strikingly illustrate. In presenting to you the cast of the patient, and calling your attention to the considerable convexity of the right nates, we may briefly state in addition, that in this case we found, on post-mortem examination,

1. Enlargement and softening of the caput femoris.
2. Considerable enlargement of the acetabulum, with caries and total destruction of cartilage.
3. Perfect solution of the continuity of the femur by caries, immediately below the small trochanter.
4. Perforation of the capsule.

Hence all that was calculated to favor displacement, but we did not find dislocation.

The specimen referred to being deposited in the museum of the College of Physicians and Surgeons of New York, may at any time be examined, and our statement thereby verified.

The chief error at the basis of this false theory of spontaneous dislocation, is the presumption of a true shortening where none exists. By this preconceived opinion the collateral symptoms were entirely disregarded, though they would have satisfactorily explained the mechanical conditions, without grasping at the untenable doctrine of spontaneous dislocation. Sapienti sat.

Gentlemen, Prof. Bonnet, of Lyons, a scholar and clinical teacher of great merit, and who has greatly advanced our knowledge on joint diseases, has clearly demonstrated that the mere turning of the pelvis on its longitudinal axis will produce an apparent shortening of the thigh of about an inch. Of the correctness of that observation, we may convince ourselves at this very moment, by imitating the motion. In placing ourselves on this chair, you notice that our knee-joints are perfectly parallel, and the thigh of equal length. By twisting one side of our pelvis backwards, whilst the other, of course, turns forwards, you observe that one recedes an inch from the other. This is one of the mechanical conditions noticed in the third stage of the disease. Another, equally imitable, is the declivity of the pelvis, by which one side is raised above the other from two to more inches; the permanent flexion of the thigh upon the pelvis accounts for the difference.

As in the second stage, the pelvic declivity, the spinal curvature, and the different height of the shoulders disappear forthwith, when the patient assumes the sitting posture, thus conclusively demonstrating the consecutive nature of those deformities.

In placing the patient perfectly straight in the recumbent position on a board, we notice that his affected extremity is greatly adducted, and that its axis forms an acute angle with the transverse diameter of the pelvis. Abduction, being opposed by the contraction of the entire group of adductors, can be effected only by raising the pelvis, and extension, being equally resisted by the permanent shortening of the flexor muscles, can be effected only by the anterior inflexion of the spine and the greater inclination of the pelvis. It is self-evident that no patient could walk with crossed legs, as the malposition would imply, hence he has to compensate one deformity by another. In order to swing his extremities parallelly, as indispensable to locomotion, the patient abducts his healthy leg and raises and voluntarily inclines his pelvis, as much as sufficient to accomplish his task.

The idea, gentlemen, that the contractions of the adductor and flexor muscles are of a voluntary nature, is entirely inapplicable, since even the most profound anæsthesia is not capable of subduing them. Their tension requires the knife, and division alone can overcome them. This operation, and its effects upon the malposition, have been repeatedly witnessed by you. Thus by arguments demonstrated to your physical eye, we have proven that the deformities and shortening depend on no other cause than the reflected contractions of muscles.

The last stage of hip-joint disease comprises, in one respect, the final settlement of all malposition, the healing of caries, and the closing of fistulous openings; in another the progress of carious disintegration and hectics. Those points may safely be referred to general surgery, requiring no special comment.

Differential diagnosis.—The discrimination of hip-joint disease from other relative difficulties is not as easy as might appear.

In the course of our practical career quite a number of diagnostic errors have come to our knowledge, committed in part by men whose sagacity and acute observation are too well known to be questioned. In one instance, the hip-joint of the healthy extremity had been touched by actual cautery, because it was adducted, whilst its abducted fellow was the real sufferer. Diastasis of the head, and fracture of the neck, are not rarely mistaken for morb. cox., to the prejudice of the patient, and so forth. You will therefore find the following tables of service to you.

Fracture and Diastasis of Head.	Second Stage of Morb. Cox.
Produced suddenly,	Growing comparatively slowly.
Eversion of limb,	Eversion and abduction of limb.
Shortening of limb,	Apparent elongation of limb.
Straight limb,	Flexed in hip and knee.
Loose articulation,	Fixed hip-joint.
Straight pelvis,	Oblique pelvis.
Crepitus,	No crepitus.
Spine vertical,	Spine curved.
Shoulders square,	One shoulder higher.
Nélaton's test (apex of large trochanter above the line).	Nélaton's test (trochanter below the line).

These differential symptoms exclude, of course, the impacted fracture.

Dislocation of the Femur.

1. Anteriorly and Superiorly.	Second Stage of Hip Disease.
Suddenly produced,	Comes gradually.
Extremity much everted,	Less everted.
Immobility,	Immobility.
Moderate shortening,	Apparent elongation.
Abduction,	Abduction.
Head can be felt in the groin.	Head cannot be felt at all or very indistinctly, and then at the acetabulum.

2. Posterior Sup. Dislocation.	Third Stage of Morb. Cox.
Produced suddenly,	Growing gradually.
Limb shortened and everted,	The same.
Adducted,	Same.
Immobility of articulation,	Same.
Flexion at the hip,	Do.
Moderate shortening,	Apparent shortening considerable.
Head most usually felt under the glutæus maximus muscle,	Head not felt at all.
Apex of large trochanter above Nélaton's line,	Below or even with Nélaton's line,
No stationary contractions of muscles,	Permanent contractions of flexors and adductors.
Pelvis square,	Pelvis raised and oblique.
Walks with healthy leg bent,	Healthy leg straight.
Touches ground with almost entire sole,	Only with the ball of the foot.
Spine straight,	Spine flexed laterally and anteriorly.
Angle of inclination of pelvis unchanged.	Angle of inc. of pelvis increased.

Pott's Disease and Psoas Abscess.	Third Stage of Morb. Cox.
Preceding pain in the spine,	Preceding pain in the hip-joint.
Posterior and anterior deformity (not always),	Lateral and anterior deformity.
Simple flexion and shortening of limb,	Flexion, adduction and inversion.
Limb may be extended under chloroform,	Cannot.
Pelvis square,	Pelvis oblique.
Nates even,	One higher.
Cannot walk except with support of spine by resting hands on knees,	Can walk, and without these precautions.
Abscess under Poupart's ligament,	May have the same.
Hip articulation free,	Almost fixed.
Slight retractions of flexors,	Fixed contractions both of flexors and adductors.
May have signs of paraplegia.	Has none.
	Order of development by far different. The perforation of acetabulum may be ascertained by anal exploration.

Periostitis of Femur.	Second Degree of Morb. Cox.
Mostly commences suddenly,	Grows gradually out of preceding stages.
Femur more or less enlarged,	Not at all.
Femur painful on pressure,	Not in the least.
Joint free,	Almost fixed, and when moved often crepitus.
Extension and adduction impeded,	The same.
Joint painless,	Painful on pressure.
Pelvis oblique and spine curved,	The same.
Contraction of flexors and adductors.	The same.

These are the chief instances that may present some diagnostic obstacles, and we have indicated the basis on which they may be distinguished one from another. It need hardly be mentioned, that the correct diagnosis is of the utmost vital importance; as for instance, in fracture. A little patient was brought to us from Demopolis, Alabama, with alleged morb. cox., with a seton at his joint. Careful examination revealed fracture or diastasis of the neck. Against all odds and anticipations we succeeded in relieving him by rubbing the fragments upon each other, creating thereby the required inflammatory action of the parts, and subsequently putting him in our wire apparatus. Upon another case we have performed resection of the carious neck of the femur, which in our opinion resulted from an unnoticed fracture or diastasis. The same importance may be urged in relation to periostitis; for a simple incision down upon the bone may relieve your patient at once, and protect him against scores of troubles and dangers by an early and correct diagnostic discrimination, as the case in Ward No. 3 of our hospital illustrates.

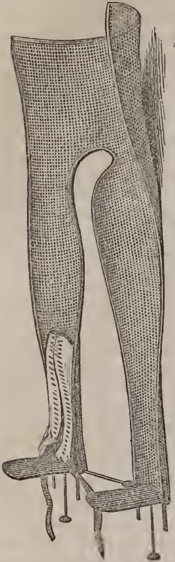
Ætiology.—During the last few years we have been in the habit of taking notes of our patients, more particularly of those suffering from hip-joint disease. The number of the latter thus recorded amounts to eighty-seven, fifty-eight of whom were boys, their respective ages varying from six months to sixteen years. In seventy-one of those cases traumatic occurrences preceded the disease; in some they could be but imperfectly ascertained, and in ten, accidents were totally denied. We have taken more than ordinary pains to elicit these facts, as the generality of surgeons are strongly inclined to ignore them entirely,and to set the causes down as scrofulous. To deny the influence of a perverted constitution, or the participation of a low organization of nutritive fluids in the establishment of bone and articular diseases, would be, to say the least, a grave error. But it is just as contradictory to look upon every articular disease as constitutional and specifically scrofulous. Our clinic has exhibited to you a number of patients, whose countenances presented the very picture of health, and whose parents or ancestors, as far as could be traced, had been of good and robust constitution. Mary Tuthill is an instance of that kind. Again, we know for certain, that in many instances the patients had been perfectly well and healthy previous to the accident that brought the trouble upon them, and that from that time only, they failed, becoming anæmic, attenuated and prostrated. Thus it seems, as if constitutional troubles were rather the *effects*, instead of the causes. Moreover, we see the same patients improve both in appearance and weight, merely by restoring appetite, rest and comfort to them. You can bear witness to the fact, that this result has been repeatedly attained in our Institute, merely by local appliances and without a grain of medicine.

We are therefore fully justified in asserting, that a large proportion of hip-joint cases is of mere local origin, and that, in all probability, but a small fraction can be ascribed to constitutional or scrofulous causes.

Prognosis.—Morbus coxarius has hitherto been considered one of the most obstinate affections human flesh is heir to. This opinion alludes both to the danger of the disease itself, and to the negative results of treatment. The ordinary experience tended to show, that the disease, having once fairly commenced, would take its course, despite the best medical treatment and diet; and its termination at an early stage would be set down as an unexpected, but happy exception. It is, therefore, no wonder, that medical men were not very anxious to take charge of the like cases, and still less to make them an object of their special attention. As far as the old treatment is concerned, this is undoubtedly correct, for no change for the better could be counted on with any degree of certainty. Upon this gloomy aspect we are happy to infuse some cheer. The treatment adopted by us is calculated, not only to relieve our patients in as far as comfort and immunity of pain are concerned, but also to arrest the progress of the disease. And though it has its limits beyond which we can do little or nothing, yet its results have already altered the feature of prognosis for the better. We need not state that the earlier stages of morb. cox. allow more hope than the latter. Whilst the first stage would be but a trifling object for sensible treatment; the second already constitutes a grave malady.

But more decisive than the form is the morbid condition of the joint upon prognosis. Suppuration of any tissue of the joint implies progress of the disease, and caries, or perforation of the acetabulum are highly dangerous and but too often fatal. Bad constitutions, anæmia and emaciation in conjunction with caries, is almost certain death.

Treatment.—The treatment hitherto, and we apprehend still, pursued in hip-joint disease, is, to say the least, very deficient and irreliable. Honest and unbiased surgeons will admit this. The idea that this malady is of a specific dyscrasic character has been disastrous by slighting the importance of local appliances. For many years have Dr. Physick, Sir Benj. Brodie and Prof. Bonnet of Lyons, inculcated the rule of rest for joint diseases, and yet how few surgeons have followed suit. A most dangerous and culpable indifference to this imperative maxim has widely spread, and those may be even sneered at and set down as charlatans who dare to deviate from the orthodox plan of "laissez moi." Some surgeons have even the coolness to eulogize as "CONSERVATIVE SURGERY" that treatment which sends cripples into the streets and scores of victims to the grave. As a consequence, the man opposing this sort of treatment, which speaks volumes of self-condemnation, becomes the object of derision and is characterized as a "most dangerous, revolutionary and daring innovator." Truly, more moral courage is required, to shape a new course of any human pursuit, or to assume an independent position, than the mere acceptance of established doctrines; and, perhaps, forbearance is the least that such a man should expect from his co-laborers in the service of science and suffering humanity. One of the first axioms in the treatment of morb. cox., is *rest*, and the next is insuring a good position to the affected extremity. The earlier this is done the better. The whole antiphlogistic apparatus, combined with the best constitutional treatment and nursing, are not to be compared with the

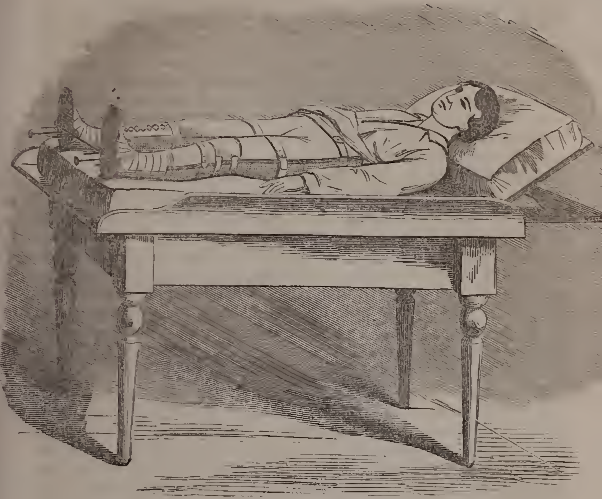


therapeutical effects of simple rest and proper position, and to use the words of a young medical friend, "they act like charms." It is very evident, that the recumbent position in bed is not the thing. It leaves the patient subject to accidental movements of his limb, and does not prevent malposition. In order to accomplish both, various means have been devised. Physick used his carved wooden splints, Brodie leather, Alden March cloth impregnated with glue, Bonnet his so called "great apparatus." With the exception of the last, we have tried them all, and in addition Hagedorn and Drondi's machine, but their inefficiency has induced us to construct another, which a waggish medical confrère has christened the "wire breeches." It consists, as you perceive, gentlemen, of a frame of stout wire, filled with wire cloth. In order to solder one to the other, they should be galvanized with tin. An opening is left for the anus. At the lower end two foot boards are movably fixed, so as to change the length of the apparatus and exercise any amount of extension, the counter-extension being procured by the healthy extremity and in part by the tuber ischii. The whole should be varnished for the purpose of protecting it against rusting. The apparatus being well filled with cotton, the patient is placed within and fastened by bandages. If extension should be decided upon, you may surround the leg with a loose stocking, or fasten it directly to the footboard by adhesive straps, as in fracture. Thus securely placed, the patient enjoys the most perfect rest at his joint. He may be carried from one place to the other, or his alvine evacuation may be attended to, without disturbing his comfort or position.

In the first stage of the malady this will be amply sufficient to check the disease and to prevent further mischief.

In the succeeding period, the therapeutical indications are more diversified. We have to contend:

1. With a higher grade of inflammation, having already terminated in effusion, of various kinds.



2. With malposition, opposing more or less the proper placing of the affected extremity.

3. With most painful nocturnal pains, threatening to annihilate the patient in the shortest possible time.

As to the existing inflammation, it is but natural that the antiphlogistic method should have been employed, but we apprehend, without avail or benefit. We have fairly and repeatedly tried its efficacy, without the desired result. All we have retained of it is local depletion, by means of leeching or cupping behind the joint. But even on them, you cannot count with any degree of certainty, nor will their benefits last more than perhaps 48 hours.

Next in order comes the derivation in its various forms of blister, seton, issue, moxa, actual and potential cautery, etc. The use of these means is certainly calculated to render the poor patient still more wretched. You inflict additional pain—you interfere still more with his comfort, and you increase the drain upon his system. They, moreover, constantly require cleaning and daily dressing, which again interferes with the quietude of the joint. And, in fine, their efficacy is, to say the least, questionable. At any rate, we have never derived the least benefit from their faithful and systematic use, nor has it come to our knowledge that other surgeons have been more successful. Nélaton, Syme, and Bonnet, advocate still the so-called linear application of hot iron over affected joints, yet they have not asserted that that remedy is so indispensable either, nor that they chiefly rely on it. We have dispensed with the entire class of derivatory appliances, and we firmly believe that our patients have fared the better for it.

But what shall we do with the effusion in the joint? If it is of a plastic character and small amount, we may leave it to resorption, and if it should organize and cause fibrous adhesions between the corresponding articular surfaces, it would matter but little, since we have it in our power to break them up again and to re-ëstablish mobility. Occasional motion of the joint in the process of their formation may even prevent them effectually; this should be done, however, with great discretion, and not before the inflammation has abated in some degree. A considerable quantity of effused material is not only a great impediment to the restoration of the position of the extremity, but it is in some respects the means of continuing inflammation by keeping up the distension of inflamed tissues. *With the quantity of exudation, the degree of malposition and the violence of symptoms correspond.* In order to relieve both, we have to withdraw it. We may do this in two ways, with knife or trocar. A straight and pointed tenotome is flatly inserted behind the joint, then so turned as to penetrate the capsular ligament. The wound of the latter should be at least a quarter of an inch long, so as to facilitate the escape of the fluid. Whilst this is being done, the extremity should be inverted, so as to diminish the size of the articular cavity, which has the effect of driving all liquid out. The punctured wound should, in fine, be carefully closed with adhesive straps, and the limb fastened in the wire apparatus. We should proceed in a similar manner with the trocar, with this difference, however, that the canula remains in the joint until the limb has been inverted. The limb should be kept in this position until the canula has been removed, the wound closed, and itself fastened down in the wire breeches, otherwise the formation of a vacuum would invite the air to rush in and cause mischief. The exact place to enter is to be determined by the fluctuation, mostly an inch posterior and superior to the large trochanter, where the joint is but little covered with adipose tissue and fascia. We prefer a fine trocar of about a line thick to the knife, as you are more certain in its handling and as you can see the contents withdrawn, which will not only perfect your diagnosis in reference to the actual condition of the joint, but will also guide you in determining the plan of treatment afterwards to be pursued.

If the retraction of muscles oppose the proper placement of the extremity, they should be divided previous to the puncture of the joint. We mostly find the tensor fasciæ latæ, and only occasionally the adductors involved. The operation is but trifling. The pelvis of the patient should be firmly fixed, and the limb well extended by assistants. This raises the muscles from the subjacent parts. In pressing the knife through from without to within, we are certain that all fibres are divided, and that no important parts are injured. The tensor we divide about an inch below the sup. ant. spin. process of ilium, and the adductors at about the same distance from the pubic arch.

We have performed puncture of the hip-joint about 50 times, mostly with signal relief, and at no time with disagreeable consequences to the respective patients, whereas the subcutaneous division of those muscles has been very frequently resorted to. We do not pretend, gentlemen, that puncture or myotomy, by themselves, cure hip-joint disease, or have any direct influence upon the disintegrating process of the bones; but our daily observation teaches us, that they are the most valuable and indispensable remedies in its treatment. What *no other* therapeutical agent can do, they will accomplish. In the first place, they render the quietude of the articulation and proper position of the extremity possible; they alleviate not only the pain of the joint itself, but remove in almost all instances that characteristic nocturnal pain which rapidly consumes the strength of the patient. It improves the form, and if the disease has not proceeded too far, having caused already ulceration and caries, it will even check its progress. Our confidence in myotomy is so unbounded as to decline the charge of any articular disease with the exclusion of that remedy, and in no disease is it more reliable than in those of the hip and knee-joint.

The rest and painlessness thus attained, the patient begins to improve, to increase his weight, to look better, and to become cheerful. The wire apparatus is indispensable to his comfort, and he solicits to be replaced, if it should have been deemed necessary for the sake of cleanliness, to remove it. The apparatus must remain applied until the joint has become almost painless, when the patient may be permitted cautious locomotion, upon crutches, supported by a framework moving upon four wheels. That the patient should receive the best of air, of food, and of such remedies as his case may otherwise require, is a matter of course.

The objection has been raised against this treatment, that the confinement was highly prejudicial to the general health of the patient. This is, however, not the case, as you will readily observe in the blooming appearance of our little patients in the hospital.

And if it is, even, in a certain measure detrimental to the system, which we do not at all admit, it would certainly be the lesser of two evils. The same argument might as well be applied to fracture of the leg, and yet, nobody can treat such patients without the inconvenience of confinement.

In a few instances, myotomy not only failed in relieving, but rather seemed to aggravate the sufferings. This was found to be due to imperfect division. But in *one case*, that of Richard Trottman, the division of all contracted muscles, did not give the desired relief. Anodynes and narcotics of every description were tried in vain. Morphine in pretty large doses, neither allayed the pain nor secured rest. In combination with strychnine, however, it had instantaneous effect.

The course of gradual improvement is occasionally, though rarely, interrupted by new inflammatory attacks. A few leeches or cups will generally suffice to meet the case.

But, gentlemen, if suppuration of the joint has been made out, the question rises, whether the soft parts are exclusively involved, or whether it extends to the osseous tissue. The former, we may infer from the fact, that the fluid removed from the joint contains but pus, and no detritus, or traces of osseous or cartilaginous structure, and that the moving of the joint reveals no crepitus. If this be the condition in which we find the joint, we can lose nothing in observing the rules previously given for treatment.

It should be recollected, however, that suppuration very soon involves the osseous and cartilaginous structure, and therefore frequent though careful examination should be made in order to ascertain the actual condition of the joint.

Having discovered, that the hard tissues of the joint have at last become disintegrated, the question rises, how to meet the altered condition?

We should advise to maintain perfect quietude of the joint, good position of the extremity, free discharge of matter, and to sustain the system by all possible means. Thus we may succeed in overcoming limited caries, and eventually accomplish the restitution of the bone with anchylosis. Whether it be advisable to inject the joint with a diluted tincture of iodine, as Nélaton suggests, or whether the internal administration of phosphates will facilitate the restorative process, we must as yet leave undecided for want of personal observation.

If, however, the caries advances, and the drain upon the system becomes more manifest, the question rises, whether it be advisable to tender artificial aid in removing the diseased bone, and give the patient a fair chance of recovery. This question has been variously answered by different surgeons. Those who contend that the disease is of an exclusive scrofulous character, are consistently disposed to depend exclusively on constitutional treatment; others advise the free opening of the joint (John Gay); and some advocate the entire removal of all carious portions, at one stroke.

The first class of surgeons has had sway for about a century. Their results are indeed very unsatisfactory, even to themselves. The mere opening of the joint without removing all detritus seems to be inefficient. Whilst it does well in small joints, in those immediately under the skin, and where the matter may easily issue (as at the elbow joint), it is not so applicable to the hip-joint, at least as far as our experience goes.

There is another disadvantage; simple incisions close very soon, and whilst the wound is open, the air also acts upon the healthy parts of the joint, tending to spread the disease. A few successful cases in our hands can not compensate for losses we have sustained.

We therefore join those surgeons who freely open the joint, and at the same time remove all diseased parts of bone. It is hardly necessary to offer arguments in favor of this operative proceeding, since nature adopts the same principle, though in a different and less decisive way. Where the joint suppurates, the perforation is inevitable, and where bones are disintegrated, she removes them in small fragments. The views as to the time to operate, also differ among surgeons.

Some wait until suppuration has prostrated the system, or symptoms of pyæmia manifest themselves. We believe that the operation should be performed as soon as the fact has been clearly established, that the head of the femur and a part of the acetabulum are diseased to any extent. To hope, under such circumstances, for spontaneous repair of the diseased structure is at best vain; whereas it seems certain, that the very contact with a decomposed, purulent fluid, is of itself sufficient to spread the disease. An early operation stands therefore the best chance of success.

We have performed the exsection of the head of the femur, and part of the acetabulum seven times, and have aided in one. Four died many months after the operation, one of diphtheritic croup, two of convulsions, and one from exhaustion. In none was the post mortem permitted. The respective wounds remained open, and continued to suppurate until death. In two that died, perforation of the acetabulum existed previous to the operation, and the latter was resorted to as *ultimum refugium.* Four cases recovered, including the case of our esteemed friend Dr. Lewis A. Sayre. The second was that of Mary Johnston of Cincinnati; the third was that of Michael McCarty of Portland, Connecticut, and the fourth was that of Fred. C. Schroeder, still in our hospital. The experience we have derived from these cases, strengthens our hope for better statistics in the future, and the construction of our "wire breeches" has turned out to be a most serviceable auxiliary to the successful termination of that operation. You have witnessed it twice in this hospital, and your own observations will convince you that the operation is attended with but a trifling loss of blood, that no important parts present themselves to the knife, and that its immediate and remote effects upon the patient are of no consequence whatever.

The operation itself can, therefore, not be set down as a dangerous one. Its failure must be ascribed to pathological causes over which medico-surgical art has no control.

The details of the operation are exceedingly simple. An incision along the anterior margin of the musculus glutæus medius downwards to the large trochanter, and one inch and a half beyond it, brings you upon the joint. A second cut severs the mm. glutæii (med. and min.) pyriformis, etc., from their insertions. Another opens the joint around the superior and anterior segment of the femoral head. In crossing the affected extremity to the other, as far as possible, you will readily dislocate the head, and bring it out of the wound, the lig. teres mostly being destroyed. With a small saw, you may easily remove as much of the diseased bone as you deem proper, but as much of the periosteum as possible should be saved, as it will supply the material for the intermediate substance in the place of the removed bone. With a chisel or rasorium, you may then clear the acetabulum from all diseased elements, and after having lightly filled the wound with charpie, secure the patient in our apparatus.

During the first few days no extension should be employed, but as soon as the inflammatory reaction has passed off, it should be gradually assumed in order to secure the full length of the leg.

Some months are required to give the required firmness to the intermediate substance, and render it useful for locomotion. Dr. Sayre's patient could walk and jump the rope four months after the operation, with but half an inch shortening, though a very imperfect apparatus was applied to extend the limb. Michael McCarty's leg was one and three-quarter inches shorter, he resumed locomotion some three months after having been operated upon. Mary Johnston has acquired the full length of her extremity, but owing to her disposition to obesity the intermediate substance is not, as yet (two years after operation), firm enough to bear her weight (some 80 pounds); and to all appearance Fred. C. Schroeder will acquire almost the full length of his extremity.

Gentlemen, this closes the subject of our lecture, reserving the consideration of anchylosis, consequent upon hip-joint disease, and its treatment, for a future occasion.

Art. IV.—*Post-mortem Appearances in Cholera Infantum, with Cases.* By J. Lewis Smith, M.D., late physician to the Northwestern Dispensary, N. Y.

Several months since, I communicated to the Journal of Medicine the records of eleven cases of cholera infantum, treated during the summer of 1857. Since then I have made the four following autopsies, and although they were necessarily not as thorough as I desired them to be, they throw additional light on the condition of the abdominal viscera in this fatal and much-dreaded disease.

The term cholera infantum is no doubt unwisely chosen to designate the complaint to which it is applied. The symptoms of the disease are not usually as rapid as we would infer from the name. During the summer months a large proportion of the children under two years of age in our large cities, have more or less relaxation of the bowels, and if this be at all severe, especially if it be attended by constitutional disturbance, it receives the appellation of cholera-infantum. The symptoms of this disease may be summed up as follows: Frequent, thin, acid evacuations, usually green, sometimes yellow or of a mixed color; irritability of stomach, sometimes commencing with the looseness, oftener at a later period; thirst; heat of surface, except in cases of great prostration; accelerated pulse; natural respiration; no pain; no tenderness on pressure of the abdomen; progressive emaciation; sunken eyes; loss of strength. The complaint may terminate in recovery or death, in a few hours or days, or through many fluctuations after several weeks. It is evident that cases presenting the above symptoms may be termed by some diarrhœa,or enteritis, and I have thought it proper to make the above remarks, that it may be known what I include in the expression, cholera-infantum. It will be seen that the lesions discovered last summer bore a general resemblance to those of the preceding, but differed from them in one or two respects.

Case 1.—F., a female foundling, was placed, when a few days old, with a woman who ill-treated her, and gave her insufficient nourishment. On the third day of June last, when about two months old, she was taken from this woman in an enfeebled condition, and was placed with a second nurse, in whose hands she died. After her second adoption she continued feeble, but without apparent disease, till the 28th day of June, when her bowels became relaxed.

On the 2d day of July the dejections became so frequent that the nurse took alarm, and brought her to the Dispensary for treatment. At this time her eyes were sunken, limbs attenuated—the stools thin and greenish, and she vomited occasionally. Treatment, which consisted mainly in the exhibition of laudanum, lime-water and brandy, availed little; she gradually failed, and died on the 12th day of July. She had no symptoms indicative of cerebral complication, and was apparently conscious till the last.

Autopsy.—Body emaciated, and eyes sunken; liver considerably enlarged, and of a more yellow cast than I had yet seen in this disease; stomach apparently healthy; red points and streaks on the mucous surface of the small intestines through their whole extent; the mucous membrane of the large intestines presented more disease than the jejunum and ileum, being reddened, thickened, and slightly ulcerated. These lesions existed in about an equal degree in the ascending and descending portions.

Case 2.—L., a male infant, was weaned on the first day of May, 1858, at the age of thirteen months, and after this his principal diet was milk from the country. His health continued good till about July 5, when his dejections became too frequent, and a few days subsequently vomiting occurred. He was visited by an irregular practitioner, who prescribed emetics daily, believing that the offending cause lay in the stomach. The vomiting and purging continued without any abatement, and he grew more and more emaciated till the 23d day of July, when I was called to see him.

He was now so emaciated that no reasonable hope could be indulged of his recovery. The pulse was accelerated, the tongue moist and slightly furred, the stools watery, of an acid reaction, and numbering from eight to twelve daily. By means of brandy and lime-water the vomiting was arrested, but otherwise there was no improvement. The discharges continued thin and frequent, and the emaciation and debility slowly but progressively increased. Besides the lime-water and brandy, which were given every two hours, the former in teaspoonful doses, the latter in doses of twenty drops, I ordered one drop of laudanum to be given three or four times daily.

When I had visited him about a week, sprue began to appear in his mouth, and for two days his stools contained considerable blood. After this the dejections had a dark or slate color, and continued with about the same frequency till within a day of his death. On the first of August symptoms were noticed indicative of cerebral complication; he grew drowsy, frequently stroked his face or forehead, and on the sixth and seventh of the month, he held his head rigidly back, adducted his thumbs, cried out at intervals as if in great pain, and finally passed into a comatose state, in which he died on the seventh.

Autopsy on the following day. Body much emaciated, the intestines examined externally presented no noteworthy appearance, and the mesenteric glands were not enlarged; liver of a lighter hue, and apparently somewhat larger than natural; there were red points and streaks on the mucous surface of the stomach, but otherwise this organ seemed healthy; the small intestines, which were opened in several places, presented the usual appearance; I neglected, however, to examine the ileum near the ileo-cæcal valves; the mucous membrane of the large intestines was vascular and thickened through its whole extent, but in two places only were there traces of continuous inflammation, viz., in the ascending portion, and in the sigmoid flexure. It contained also numerous ulcerations from one to two lines in breadth, and apparently not reaching to the muscular coat. The other viscera were not examined.

Case 3.—On the 19th day of Sept. 1858, I was asked to visit L. K., a female infant thirteen weeks old and in a dying condition. I was informed that the child's mother had died when she was a few weeks old, after which she had been nourished by the bottle, and that she had been with her present nurse only two weeks. At the time of her adoption by this nurse, her stools numbered five or six in twenty-four hours, but the discharges became more frequent, and during the four days preceding my visit had reached the number of ten or twelve daily. She also had attacks of vomiting and was feverish. Three days before her death symptoms of cerebral congestion or effusion occurred; the thumbs were adducted, and drowsiness and finally spasms supervened. She died a few hours after my visit in a comatose state.

Autopsy.—Body somewhat emaciated; the stomach and intestines examined externally presented no noteworthy appearance; the stomach was moderately distended with a liquid resembling water and coagulated milk, in which were dark streaks, probably of blood; the mucous membrane of the stomach did not appear to have undergone any alteration, having the light pinkish hue of infancy; in the small intestines there was a similar absence of any lesion except near the ileo-cæcal valves, where the mucous-membrane was somewhat thickened, and the Peyerian patches unusually distinct; the contents of the stomach and small intestines gave a slightly acid reaction.

In the large intestines the mucous membrane, from the ileocæcal valves to the rectum, was mottled with red points and streaks, and thickened; these lesions were found in about equal intensity in all parts of the colon; with the back of the scalpel bloody mucus could be scraped from the surface of the colon, and this surface contained either small ulcerations or hypertrophied mucous follicles. The liver had apparently its usual color, size and consistence.

Case 4.—R., a nursing female infant, was taken on the 8th day of July, 1858, when about six weeks old, with looseness of the bowels. The mother was healthy and there was no obvious cause of the attack except the high temperature of the season. A homœopathic physician attended her till about the 16th day of July, when he was discharged, as the symptoms were daily becoming more alarming. At this time she was rather emaciated; she had a cough from a moderate bronchitis; her pulse was somewhat accelerated; her stools, which were thin and green, numbered six to twelve daily and gave an acid reaction; she vomited occasionally, continued to nurse and was very fretful. I prescribed aquæ calcis ʒj. every two hours if the discharges continued acid: tinc. opii gtt. ¼ according to the frequency of the evacuations, and wine or brandy.

From this date till the 29th of August the looseness continued with but few intermissions, though considerably checked by the medicines. On the 29th, as there was no new symptom, my visits were discontinued. On the 19th of September, just three weeks after my last visit, I was called again to see the child and found her dying. The limbs were cold, eyes bleared, and the respiration short and at long intervals. She could not be aroused and was much emaciated, though her passages, the parents stated, had been nearly healthy during the past few days. Death occurred soon after.

Autopsy.—Body emaciated and eyes sunken; the mucous membrane of the stomach presented its usual appearance. The mucous membrane of the small and the large intestines, throughout their whole extent was vascular and thickened in places; the fecal matter in the intestines had a muco-sanguineous appearance, which is more noteworthy as the last dejections seemed healthy. With the back of the knife I could scrape blood with the mucus from the mucous membrane. The jejunum and ileum were as much diseased as the colon, and in no part of the intestines were ulcerations noticed. The liver and kidneys were apparently healthy; the spleen had a leaden color.

The following is a résumé of the post-mortem appearances narrated above:

Stomach.—In three cases this organ seemed healthy; in the remaining case it was vascular, a condition due perhaps to brandy, as the child took this stimulant at intervals of two to four hours, during the last two weeks of his life. In a paper on Cholera Infantum published by me in the July number of the Journal, and which contained my observations for the year 1857, it was stated that the stomach contained no appreciable lesion in five cases in which I had examined it, so that in eight out of nine of my post-mortem examinations, in cases of cholera infantum, this viscus has had a healthy appearance.

Small intestines.—In two of the four cases the small intestines were more or less inflamed throughout their whole extent; in one they seemed healthy except near the valves, and in the other case the jejunum and the upper part of the ileum were also healthy; the part near the colon not being examined. These cases, so far as they go, agree with those published in my former paper, in the fact that the small intestines were not uniformly inflamed, and that the ileum may be affected when the jejunum escapes.

Colon.—In all four cases this was inflamed, both the ascending transverse, and the descending portions. In three of these the inflammation seemed pretty uniform; in the other the point of most intense inflammation was the sigmoid flexure. In three cases the records state that the mucous membrane of the colon was thickened; in the examination of the other patient no note was made of this fact. In two of the autopsies the colon was found distinctly ulcerated, and in one of the other two there were either slight ulcerations or else unusual distinctness of the mucous follicles, while in the remaining case no ulceration was present.

In the above cases, then, as well as in the eleven cases whose histories are given in the July number, the colon was without exception the seat of inflammation; but these cases differed from those in the fact that the ascending portion, with one exception, was as much diseased as the descending.

Liver.—In two of the examinations this organ contained no lesion appreciable to the naked eye; in the other two it presented a lighter hue than the impoverished condition of the blood would be likely to cause, and in one of these last there was considerable enlargement. Dr. Gonley, whose zeal and accuracy as a microscopist are well known in this city, has lately informed me that in several instances he has found considerable fatty deposition in the liver in cases of cholera infantum. I am now inclined to think the morbid condition mentioned by him, may have been present not only in the above cases in which the liver had the color characteristic of fatty disease, but in some of the cases examined by me in 1857, as the naked eye cannot well discover this lesion unless the amount of fat be considerable.

It is worthy of remark that in all the post-mortem examinations made by me in cases of cholera infantum, now fifteen, there have been evident traces of inflammation in the colon, usually of a severe grade. Those who believe that the disease is not essentially inflammatory, can find an explanation of this in the fact that the evacuations are so acid. During the past two summers I have carried litmus paper with me in my visits to children affected with summer complaint; and in all cases, except in the advanced stages of the disease, when there was reason to think ulceration was present, have found the dejections acid. What the relation of this acidity is to the inflammation, whether as cause or effect, is not easily determined. The fact that an erythematous blush, or even excoriation, so soon occurs around the anus in cholera infantum tends to show that the stools are sufficiently irritating to cause intestinal inflammation. On the other hand, some excellent authorities in infantile pathology state that the evacuations are commonly acid in the entero-colitis of children. I have formed no opinion as to which has the precedence, the acidity or the inflammation; but I have known the stools to be acid at the very commencement of the complaint.

Another point of interest in reference to the above cases is the fact that three of the four children had not yet reached the age of dentition. As there has been thought to be an intimate relation between the summer complaint of children and dentition, the following table of one hundred and forty-three cases, prepared from my note-book and showing the stage of this process, will be interesting:

Have no teeth	25
Cutting incisors	54
Have incisors, cutting first molars	17
Have incisors, first molars, cutting canine teeth	25
Have incisors, first molars, canine teeth, cutting last molars	7
Have all the teeth	15
Total	143

From this it appears that the disease is most frequent during the first half of dentition, and is comparatively rare when the broad surfaces of the second or last molars are cutting the gum. It is interesting also to observe that the disease does occur before and after dental evolution. Both these facts go to show that the influence of teething in the production of cholera infantum must be subordinate.

The following table will show more accurately the age at which the complaint usually takes place:

AGE.	NUMBER.
Five months and under	23
From 5 to 12 months	157
" 12 " 18 "	124
" 18 " 24 "	74
" 24 " 30 "	9
" 30 " 36 "	2
Over 36 months	9
Total	398

This table shows that the summer complaint of children is rare before the fifth month and after the second year, so as to correspond with the time of increase in the size of the mucous follicles as it is given by Billard and others.

Art. V.—*Extirpation of the Eye.* By C. R. Agnew, M.D., Surgeon to the New York Eye Infirmary.

There is no principle of practice in ophthalmic surgery so incontrovertible as that of the propriety of extirpating a diseased eye, with the aim of stopping sympathetic trouble in the fellow organ. And yet there are still those who shrink from the practice, on account of its supposed danger, and who doubt the frequency of cases calling for so grave a procedure.

This aversion springs in part from a very natural horror of the old method of operating by eviscerating the orbital cavity so thoroughly as to leave only a short optic nerve stump, and a portion of the cellulo-adipose cushion, and origin of the muscles. It is difficult to persuade such persons, that the method of extirpating recommended by Mr. Critchett, constitutes one of the simplest operations in surgery. Indeed so simple, both in its performance and results, as to merit a place among the operations of minor surgery, rather than among those grave procedures to which the former method certainly belongs. I may state, in brief, that my experience in extirpation of the eye by Critchett's method, now includes nearly thirty cases, and I have yet to see one in which the most trivial occurrence of an unpleasant nature has transpired. As the method referred to is not generally practised, and therefore, cannot be generally understood, I will venture, even at the risk of repeating, for some, a trite subject, to recite the plan first suggested by Mr. Critchett. The main feature in the operation may be said to be a multiplication of the ordinary method of operating for strabismus. The first step is, to cut through the conjunctiva oculi by a circumsection of the cornea in a line with the insertion of the recti muscles; then to open the theca oculi, close to the sclerotic implantation of the external rectus, and a little below its inferior border. All this may be done with a pair of toothed forceps, and a pair of scissors, the latter so made as to cut by their very points, and yet so blunted as not to endanger the sclerotic. The sclerotic is easily recognized by its glistening, non-vascular appearance; and moreover, immediately upon opening the theca oculi, a watery fluid exudes. Having exposed the lower border of the tendon of the rectus, an ordinary strabismus hook is slipped under the muscle, and a cut or two of the scissors soon severs it from its sclerotic implantation.

Care should be taken to cut between the hook and the cornea, in such a manner as to leave as little of the muscle as possible attached to the eye-ball. Having divided one rectus, the other steps are easy. The strabismus hook, when pushed in the line of the first section, naturally glides beneath the theca oculi and the next rectus. It is better to divide the superior rectus after the external, and then the inferior rectus, leaving the internal for the closing sweep of the scissors after the optic nerve has been severed. After dividing the muscles, the cavity of the ocular sheath is fairly invaded, and nothing remains but to divide the optic nerve and the internal rectus. The division of the optic nerve is first effected by means of the straight blunt scissors. They should be gently pushed between the temporal aspect of the theca oculi and the sclerotic, until their closed points impinge upon the optic nerve at its junction with the eye-ball. A gentle rocking motion, and a slight separation of the blades, will cause them to inclose the nerve-trunk, which may be cut at a single clip. When the optic nerve is not shrivelled by atrophy, its section communicates a decided jarring sensation to the operator's hand. As soon as the nerve is divided, the eye-ball bulges forwards, and may be easily tilted upon the side of the nose, and the internal rectus divided. The exact moment of the section of the oblique muscles varies, depending upon the precision with which the sclerotic implantations of the recti are sought for. The section of the optic nerve is followed by a welling up of blood, which invariably ceases, without requiring ligatures, a few moments after the eyelids fall into position. And I would recommend, that no attempts be made to free the sub-palpebral space from blood; the wounded parts will adjust themselves in such a manner as to control the hemorrhage. It will be remembered, in this connection, that most of the vessels divided in the operation, are cut in their terminal branches, and therefore, less apt to bleed profusely. It is evident, from the description, that the ocular conjunctiva, with the exception of so much as is included between the insertions of the recti and the corneal periphery, is left behind; moreover, that the ocular sheath is left in its relations to the tendons, and merely separated from the sclerotic; that the muscles are left of full length, and that all these tissues falling backwards, in their normal juxta-position, submerge and protect the optic nerve stump. The conjunctival cul-de-sac remains intact, and therefore well fitted to receive the margin of an artificial eye. Now, as to the result—the test of all surgical works, I do not remember a case, in which union has failed to take place by first intention, or in which the resultant stump or screen did not move in harmony with the fellow eye. We are often asked, does an artificial eye move as deceptively as when placed upon a stump formed by an atrophied eye-ball. The answer is, that the range of motion is usually more limited, but not sufficiently so to create much deformity. Indeed, it is not claiming too much for the result, to say, that the motion in an artificial eye, placed upon such a stump, is as good as the average of motion in other eye stumps.

But the advantages of the procedure by no means rest here. For the simple reason that experience is proving that an atrophied ball or eye stump, resulting from ophthalmia posterior, or long-continued destructive inflammation of the cornea, or choroido-iritis, whether traumatic or non-traumatic, does not invariably remain in a quiescent state, or bear the pressure of an artificial eye. Indeed, I have, on several occasions, been called upon to remove such bulbs, for disease in themselves, or on account of disease excited or perpetuated by them in the fellow organ.

I have in my recollection, a case somewhat in illustration, which came under my care, and then passed to that of Dr. Willard Parker,—J. L., aged 56, while striking a steel drill, detached a bit of metal, which entered his right eye at the junction of cornea and sclerotic. This happened in 1846. Twenty hours after the accident, he presented himself at the New York Eye Infirmary, and in three weeks was so relieved of the traumatic inflammation, as to decline further treatment. He still had considerable vision in the injured eye, but objects seemed to be viewed by moonlight. At the end of two years, he returned to the infirmary, still able to read shop signs with the injured eye, but with the organ prone to congestion and pain under the irritation of use.

In a few days, from the effects of cupping and counter-irritation, he enjoyed marked relief, and for three years did not seek professional advice. The eye was, however, sometimes congested and painful. Vision had very slowly deteriorated, until five years after the injury it was quite gone from the injured eye. In 1855, the pain in the injured eye became so severe that he sought the advice of Dr. Wallace. He laid the somewhat atrophied eye open, and from its cavity removed a fragment of metal a sixteenth of an inch square. In what portion of the eye it had been deposited does not appear. Now follows an interesting fact. After the removal of the foreign body and evacuation of the contents of the eye-ball, the patient suffered intensely for nine weeks from inflammation of the remaining tissues. Moreover, by this time, the fellow eye began to give marked signs of amaurosis. In the summer of 1857 I first saw him. In the right orbit he then had an atrophied bulb, in a state of chronic congestion. The left eye offered the ordinary symptoms of well marked amblyopia. His forehead wore the characteristic scowl of deep eye disease, and his morale was much depressed by long continued and compulsory idleness. I urged upon him the propriety of having the atrophied bulb removed. He would not consent, but solicited a course of medicine. I yielded, and gave potass. iodid. and other constitutional and local means a trial without any good effect. When I again urged extirpation, he left my clinique. Some months afterwards I saw him and ascertained that he had gone to Dr. Parker, who proceeded without much delay to extirpate the offending bulb. There had been an interval of some months between his leaving my service and his application to Dr. P., during which time the sympathetic disease had progressed. He was very much benefited by the operation. He enjoyed the absence of his old tormentor, and when I last saw him his remaining eye was slowly improving. That his recovery was not rapid or complete, should not excite surprise. The long continued sympathy, ranging through nine years, had so impressed the left eye, as to render its return to health very slow. It will be sufficient to say, that no blame attaches to those who first saw the case. The principles of extirpation did not then apply. There was no evidence to prove, beyond doubt, the residence of the foreign body in the eye, during his two visits to the Infirmary, nor was there any implication of the fellow eye. I adduce the case to show the length of time during which such traumatic inflammation may creep, before it assumes its alarming attitude towards the fellow organ, or extinguishes the sight of the primitive eye. But I do believe, there was a time, in the history of the case, when had extirpation been resorted to, the damage of the second eye might have been prevented, and the patient spared the dreary existence of the victim of chrônic ophthalmia. I believe it to be true of most cases of lodgment of foreign bodies in an eye, that the destructive inflammation does not immediately ensue or go on continuously after it has been started. There is a period of incubation, so to speak, following the lodgment of the foreign body, if it be submerged, and not projecting from the organ; and the inflammation is often of a paroxysmal character, and the interval not unfrequently furnishes an illusive hope of cure. It is curious to observe how the periodicity is often, in a measure, controlled by quinine.

I have little faith in the continued health of those bulbs, or eye stumps, the products of a chronic inflammation which has existed long enough to impress upon the residual eye tissues an inflammatory diathesis. I know there are cases in which an atrophied bulb attains a condition of quiescence not subsequently disturbed. but they are more exceptional than is generally supposed, and not included in the class alluded to above. And why leave a sightless bulb, if it remain congested, or show any disposition to convey irritation to the fellow organ, when it may be removed by a simple and harmless operation, and still leave a stump for an artificial eye? The operation is adapted both to the child and the adult. I have performed it several times upon subjects under the age of 13. In one instance, that of a little girl, aged 9, I inserted the artificial eye on the seventh day after the operation. and permitted it to be worn a week without removal. At the end of that time it had produced no irritation and was therefore reinserted. But the grand attribute of this surgical procedure, is not the relation of the stump to an artificial eye, but its curative influence in sympathetic ophthalmia.

Cases of ophthalmia posterior, and irido-keratitis have long been recognized, against which ordinary medical treatment has been impotent. For such, extirpation offers the only means of removing the injurious effects of sympathetic disease, and relieving the sufferer from a source of not only local but general distress.

I may here adduce a case, which goes as far as a single case can, towards proving the truth of the principle that the presence of one diseased eye may imperil the fellow organ.

Richard McG., aged 26, a sail-maker and a person of strumous habit, while working at his trade, Feb. 24th, 1851, wounded his left eye by a thrust with a large needle. The wound was probably at the nasal junction of cornea and sclerotic. His sight was dimmed but not extinguished, as he could read until the seventh day, when inflammation supervened and caused blindness. Venesection and other active antiphlogistic treatment was employed, but to no purpose. He suffered exceedingly until May 1st, when he entered the clinique of Dr. Wilkes at the New York Eye Infirmary. After three weeks' treatment, he was enabled to return to his work, the eye, however, being sightless. He enjoyed comparative comfort and freedom from inflammation until January, 1855, when a kick from a man's boot upon the part relit the deep ophthalmia. For five weeks the inflammation was acute, but he still followed his avocation, now that of a steamboat runner. In August, 1855, he got a railway cinder in the same eye, and had another exacerbation of inflammation. In September, 1855, his right eye began to fail quite rapidly, without giving any external evidence of disease. In December of the same year I first saw him and found the left eye, the one originally injured, in the following condition. It was one-third smaller than its fellow and irregular in shape, with a cornea apparently one-half its natural size, but transparent; the pupil nearly closed and adherent to the lenticular capsule. The ocular conjunctiva coursed by tortuous vessels; the appearances, in brief, were those of an atrophied bulb in a state of chronic inflammation.

The right eye presented serious lesions. There was moderate zonular injection. The cornea showed a slightly speckled haziness, as though from inflammatory deposit in the deeper layers of the laminated texture and internal elastic membrane. The iris was of a yellowish green color and apparently roughened by minute irregular tufted projections. The pupil was immovable and distorted. He had ordinarily sufficient vision in his right eye to enable him to perform his daily duties, but occasionally he would be seized with blindness, which would last for an hour or so, and then pass away. He had a corrugated brow, and was never entirely free from either ocular distress or circumorbital pain. Although his condition was cachetic, he denied syphilis, and was not of a rheumatic diathesis. I recommended extirpation of the atrophied and sightless left eye, desiring to get rid of its contaminating presence, before treating the fellow organ. The patient preferred a trial of less heroic treatment, and I reluctantly instituted a mild mercurial course, followed by iodide of potassium, with such attention to hygienic matters as seemed proper, but all to no purpose.

When I again urged extirpation he followed the course of the other patient and left my clinique and was not again seen until the month of April, 1856. I then saw him in the service of Dr. Van Buren, in the New York Hospital, where he had been under an alterative course for nearly three months. By this time his right eye had become so defective that he could not recognize the face of his wife. In April, Dr. Van Buren extirpated the left eye, and not to give too many details, it is sufficient to say, that in two weeks the right eye began to improve, and continued so to do, until the 14th of May, when he left the hospital, able to distinguish the features of those about him, and to read street signs. It is worthy of remark that the improvement was paroxysmal, with gradually diminishing intermissions.

In December, 1856, nine months after the extirpation, he read for me, by artificial light, the imperfect typography of the *New York Herald.* I have repeatedly seen him since and ascertained that his vision is completely restored. It is but fair to state that constitutional treatment was not entirely abandoned during his stay in the hospital. But I have Dr. Van Buren's authority to say that the wonderful and rapid recovery after the extirpation was of such a nature, as to leave no doubt in his mind as to the curative agency. It should be remembered that he had many months of constitutional treatment, of a similar nature, previous to the extirpation and to no purpose. The patient now wears a very good artificial eye. I fear I have been prolix in giving this case, but no apology need be offered to those who appreciate its importance. Does it not go as far as one case can towards demonstrating a principle of practice not generally resorted to.*

For some of us, the practice has lost its novelty, as it has been frequently employed in our Infirmary since 1854, with delightful results; and our indebtedness is due, so far as my knowledge goes, to Mr. George Critchett of the London Ophthalmic Hospital. But its application is not understood by the profession at large, who in our country, above all others, are more universally engaged in ophthalmic practice. If I have succeeded, in this imperfect paper, in carrying to the minds of those who read, the convictions, which have in me settled into fixed facts, I shall feel amply repaid. The case of McG. is not the only one in which I have seen the beneficial effects of extirpation. I could draw ten or twelve cases from my own experience. The first case in which I performed extirpation, was that of a middle-aged man, who had suffered for three months from incurable traumatic ophthalmia, which had gone on to destruction of his eye for visual purposes. The cause of the disease was a contused wound of the cornea and iris, which from neglect and maltreatment had resulted in general ophthalmia. The fellow eye had begun to exhibit symptoms of amblyopia, and his general condition, from long confinement and insomnolency, was somewhat alarming. Extirpation gave speedy relief, and I had the satisfaction of subsequently submitting the patient and a history of his case to Mr. Critchett.

---

* Since sending this to press, I have seen him and learned that he is now working at his trade, and is in the enjoyment of good vision.

Enough has been said in commendation of the simplicity and safety of the operation. I shall venture a few remarks upon its application to cases usually treated by other methods. The usual method of treating staphyloma corneæ consists in removing the tumor by circumcorneal section, with the view of inviting a shrunken globe upon which to place an artificial eye. Such a method is very good, if you can get, by a rapid process of healing, an atrophied bulb, that will not, in virtue of some latent tendency to disease, give future trouble. But aside from the latter danger, which may perhaps be excluded by care in selecting proper cases, there are two probable catastrophes, the importance of which should not be overlooked. One is the occurrence of hemorrhage from the retinal artery rupturing, as the support of the humors is removed; and the other, suppuration of the eye cavity, with or without the complication of hemorrhage. We all know that when the interior of the eye takes on pyogenic action, an abscess is formed of a most distressing and chronic character. And we also know that if hemorrhage occur after removing a staphyloma, that such inflammatory action is likely to occur. Now I believe there is but one rule to be applied to such cases. If in removing a staphyloma you have hemorrhage from the retinal artery, proceed at once to extirpate. If you extirpate, your patient will be at his work in a week; if you do not, and inflammation ensues, it will be months. This rule applies also to those unfortunate cases of hemorrhage after extraction of a hard cataract. I may here offer a case, in illustration of the opposite mode of practice. I removed a large corneal staphyloma by circumsection, taking care to let off a little of the aqueous humor by puncturing with a cataract needle. I had got the tumor fairly removed, when hemorrhage from an intra-ocular source occurred. Although familiar with the advantages of extirpation in other cases, I did not think of applying it for such an emergency. I resorted to the usual styptic treatment and stopped the bleeding, leaving the eyeball filled with clots. There was very little trouble for one week, when suddenly a violent inflammation ensued, with œdema and pain of the circumocular parts. I did not wait for suppuration, but proceeded at once to extirpate. On examining the cavity of the eyeball, it was found stuffed with clot, the centre of which was already softened and of an offensive odor. The patient soon recovered, and in two weeks received an artificial eye.

With one more case, I shall close this desultory communication. A young man presented himself in my clinique with a sightless left eye in a state of chronic congestion, and a crystalline lens calcified. A scrutiny of his case led me to believe that the cataract was a secondary disease, depending upon choroidal trouble. I extirpated the eye, found the lens calcified, the vitreous humor disorganized and oily, and the optic spot involved in an irregular calcific plate imbedded in the choroid. The optic nerve was so atrophied, as to lie in its membranes as one's wrist does in a loose coat-sleeve. He enjoyed a rapid recovery, and left the infirmary with an artificial eye.

The fellow eye, previous to the operation, had become so amaurotic that he could not attend to his business, and the operation was not resorted to until more time had been lost upon unavailing medical treatment than I shall again expend upon a similar case. He has not returned to report his present condition. I fear, however, that his habits and syphilitic diathesis may curtail the good result.

There are other cases in which I have tried the operation, and I would cheerfully allude to them now if I did not deem my remarks already too lengthy. I may state as a most deserved act of justice to my colleagues at the infirmary, that they are in the habit of practising the operation, in cases allied to those which have served to illustrate this communication.

ART. VI.—*Aneurism of the Femoral Artery, following a Popliteal Aneurism, cured by eight hours' mechanical compression.* By E. J. FOUNTAIN, M.D., Davenport, Iowa.

THE subject of the following case came under my observation in the month of April of the present year. The patient, Michael Sullivan, is a man of slight frame, and small in stature; temperament sanguineo-nervous; age about thirty-five. His previous health has been generally good. I was first called in attendance upon him for pulmonary hemorrhage and symptoms of tubercular consumption. As soon as he had recovered sufficiently to feel that the immediate danger was past, he called my attention to a pulsating tumor in the popliteal space. On examination, I immediately recognized an aneurism of the popliteal artery. It had originated, as he informed me, about the first of January previous. While running on icy ground, his foot slipped, throwing him suddenly forward; at which moment he felt a sudden and sharp pain in the situation of the present tumor. From that time he has felt a difficulty in flexing the leg, and soon noticed the swelling, which was gradually filling the popliteal space. I explained to him the nature of the difficulty, and in view of his serious constitutional disease, I expressed my fears in reference to its probable termination. I found the pulsation in the tumor readily ceased by compressing the femoral artery, and expressed my belief that it could be cured by this method, if his general health improved sufficiently to warrant the operation. All depended upon this; and although the prospect looked unfavorable, yet his improvement was so rapid, that I trusted he would recover sufficiently before the summer was over to submit with safety to the proposed treatment. After this, by my request, he was examined at different times by several of my professional associates. Their opinions confirmed my own views of the case, but the prognosis rendered was generally unfavorable. In the meantime, his cough and expectoration had entirely ceased, and his general health was being gradually restored under the use of tonics and alterative expectorants. In the latter part of July, he discovered another tumor on the anterior aspect of the thigh. This I found to be an aneurism of the *femoral* artery at about the junction of the middle and lower third. This increased very rapidly, and with its increase, the pulsation in the popliteal tumor ceased, but the enlargement still remained undiminished. The flow of blood into the femoral aneurism apparently so retarded the current below, as to permit a spontaneous coagulation of blood in the popliteal tumor.

Walking was now more difficult and painful, and his health began to fail, not as before from pulmonary disease, but apparently from derangement of the circulation and constitutional irritation, produced by a limb rendered painful and burdensome by the now rapidly-progressing disease. This satisfied me that longer delay was dangerous, and that he would never be in a condition more favorable for an operation. He at once consented to submit to whatever I might do for him, but requested the delay of a short time, that he might arrange some matters in his household for our mutual convenience during the operation. A few days after this he sent for me. I found him in bed, much reduced in strength by a diarrhœa, and greatly agitated with nervous anxiety. The pulsation in the tumor was very strong. I put him upon an anodyne treatment to quiet his nerves and arrest the diarrhœa; and at his request, made preparations to commence the operation as soon as the diarrhœa should cease. On Monday, Aug. 16th, he was in the following condition: No diarrhœa; inability to use the limb, or move it except with the aid of both hands; constant pain in the knee and leg, and almost total loss of sensibility below the knee. The tumor in the popliteal space hard and free from pulsation. The aneurismal tumor on the thigh, large, about half the size of the fist, and increasing quite rapidly. The leg considerably swollen, and moved, as before stated, only by the aid of the hands. Pulsation in the tumor very strong; and with each pulsation, so great a dilatation of the sac, as to cause a rise and fall of the bedclothes resting upon it observable some distance from the patient. The aneurismal thrill distinct and characteristic.

In considering the mode of operating, I rejected the thought of relying upon digital compression or Dupuytren's apparatus, on account of a vivid recollection of aching thumbs and wearysome changes from these to the compressor and back again, with unsatisfactory results in two cases, in the operation of which I assisted in Bellevue Hospital. The method I adopted was this: I first made a compress by tightly rolling upon itself a strip of adhesive plaster about an inch and a quarter long, and three-fourths of an inch in diameter. By applying this longitudinally over the artery, and making pressure, I found it answered many indications wanting in the compresses ordinarily used for this purpose. First, it adhered permanently and immovably to the exact situation in which it was placed; secondly, I was enabled by it to effect compression upon the artery alone, without involving either the nerve or vein; and thirdly, its semi-elastic and slightly yielding nature prevented any bruising of the skin and subsequent sloughing, and yet was sufficiently firm to effect the compression. The compressing force was applied in this way: The patient rested upon a narrow and hard bed, placed underneath the sloping portion of the ceiling of the room. A firm wooden rod was slightly hollowed out at one end so as to rest upon the cylinder of adhesive plaster, and the other was sharpened to an edge the width of the rod, to hold upon the ceiling above. By pressing the rod down the inclined wall, any degree of firm and steady compression could be obtained, and the direction varied at will to render it most effectual; while the whole of the posterior part of the thigh and the nates resting upon the bed, presented a broad surface for the counter-pressure.

Upon applying compression in this way the pulsation immediately ceased. A moderate degree of fullness of the large superficial veins followed; but the returning current of the circulation was evidently but slightly retarded; but little more than might be expected from the complete arrest of the *vis a tergo* through the femoral artery. To aid the circulation of the blood in the lower extremity, which had now to be carried on by the collateral anastomozing branches, constant friction of the limb from the foot upwards over the large veins was employed.

In this manner the blood was forced along to the body above, the circulation by this method being favored by their valvular arrangement. One hand was kept constantly applied to the tumor, and whenever the slightest pulsation was felt, the compression was immediately increased until it entirely ceased. The compression was applied permanently at eight in the evening, and continued uninterruptedly until seven the next morning, when I found there was no return of the pulsation on removing the pressure. I had given the patient three-quarters of a grain of morphia in the evening, but still he suffered much during the night, not from pain at the point of compression, but from pain and a peculiar distressing sensation in the whole limb, more especially the leg, produced by cutting off the circulation. At times the leg felt as if burning up with heat, although it was actually cooler than natural.

Being fully aware of the importance of submitting to the operation and enduring with unremitting perseverance all the pain it might produce, he bore up under the suffering of that night with heroic resolution.

During the latter part of the night I left him in the care of a watchful attendant. At 4 o'clock in the morning the patient and his attendant both state that they found the pulsation did not return when the pressure was taken off; but it was immediately resumed and kept up as before until my arrival at 7 o'clock in the morning.

I was agreeably surprised to find the operation had resulted successfully in so short a time. The pulsation had ceased in eight hours, although the compression was continued three hours longer, simply because I had left strict orders that it should not be removed until my return in the morning. I found the skin was not injured under the compress.

I removed the compression altogether, and gave him half a grain of morphia; but he continued to suffer most of the day with the same distressing sensation in the leg. The friction was continued most of the time during the day and following night. The pulsation had ceased not only in the tumor, but also in the entire femoral artery. Twenty-four hours after the removal of the compression the pulsation returned in the femoral to within about an inch of the tumor, but not in the tumor itself. This I was much pleased to see, as it permitted an easy reëstablishment of the circulation by the profunda and muscular branches. The compression was not made nearer to the tumor for fear of the femoral being diseased or weakened in that part. The appearance of the aneurism of the femoral after one in the popliteal artery, seemed to indicate a disease or great weakness of the arterial coats of that locality, if not generally. I hoped it might be confined to that part in which the tumors were situated; but fearing it might be general. I put him upon the constant use of tannic acid and tonics, to give tone to the vascular system. Fearing the possibility of the current of blood reaching the aneurismal sac, I applied the compression again for about an hour on each of the three following days. No pulsation ever returned to the tumor. It remained hard and diminished considerably in size.

Aug. 11th.—The patient is rapidly recovering the use of the limb. He is so elated by the certain prospect of recovery that it is impossible to keep him in bed. He can already flex and otherwise use the limb better than he has been able to for several months. All pain and other unpleasant feeling in the limb has ceased. Circulation perfectly reëstablished.

Aug. 21st.—Five days after the operation. Patient walked down town from the bluffs (half a mile) and back, with but little if any inconvenience, and no injury. From this time the tumor rapidly diminished in size, until, in a few weeks, almost all trace of it had disappeared, and the restoration of the use of the limb was so complete that the patient from this time was able to use it as well as before the appearance of the injury, walking without limping, and actively exercising in any way with impunity.

The history of the above case adds another to the now accumulating testimony in favor of conservative surgery. Since digital compression was first practised by Saviard, so many cases have been reported of the successful result of digital or mechanical compression, and this often in a surprisingly short time, that it appears strange the old method of operating with the knife by ligating the femoral artery, should ever be thought of until after a trial of compression. Yet I notice the September number of the New York Journal of Medicine contains a report of four cases operated upon in Bellevue Hospital, New York, by applying a ligature to the femoral artery, one of which terminated fatally. From the report of this case, in which the operation was performed by Dr. James R. Wood, resulting in the death of the patient, it does not appear that any attempt at compression was made. In only one of the other three, where the operation was performed by my friend Dr. Stephen Smith, was compression attempted. In this case the attempt to carry out this plan of treatment was given up on account of the great suffering it produced; so that a resort to the knife became necessary, and fortunately proved successful. I say *fortunately*, for no one can for a moment suppose that the unsuccessful result of Dr. Wood's case could have been in the least degree the result of any lack of skill in the operation. But who can say that an attempt to operate by compression might not have been successful, and the life of the patient saved?

The operation of applying a ligature is simple and easy enough; but it is full of danger. The percentage of deaths from all the cases operated upon in this way, I know not, only that it is sufficiently high to create the general impression that the patient's chances for life or death are about evenly balanced. Doubtless the attempt to operate by compression will sometimes, perhaps frequently, fail; but this fact should not be sufficient to warrant a surgeon in proceeding at once to operate by the knife, without first trying the far safer method of compression.

As to the manner of making the compression, there has of late been much discussion. *Digital* compression is now the favorite Parisian mode, while in Dublin the *mechanical* is preferred. A case has been recently reported of a cure of popliteal aneurism in the Dublin Hospital, by pressure, in twenty-six and a half hours. The pressure was effected by a leaden weight, of a conical shape, weighing five and a half pounds, and changed for one weighing eight pounds before the cure was completed. In one of the cases reported by Verneuil, a cure was effected by the leaden weight after other means had failed.

Apparently the most rapid cure resulting from compression, of which we have any record, is a case reported by Mr. Vanzetti, where the pulsation in the tumor ceased after four hours' careful digital compression. But in this case the tumor (a popliteal aneurism), was very small, and had previous to the operation, been considerably reduced by compression made by the patient's own hand, as efficiently as he was able, for a period of twenty days. To illustrate the value of this proceeding it is only necessary to mention the case of a patient under the care of Mr. Colles, reported in the same article, where the patient actually cured himself by keeping up for seven days a digital compression, which was necessarily very imperfect. And again, a case is reported by Broca, where the alternate employment of a compressor, *and the patient's fingers*, put a stop to the pulsations in twenty-four hours. It is apparent that the aggregate amount of pressure in the case of Vanzetti was much greater in duration than the case I have reported, where *the pulsation in a large femoral aneurism was permanently arrested, by eight hours' mechanical compression.* This case may therefore be regarded as the most rapid cure which has yet been made by compression, either digital or mechanical.* The relative merits of the different modes of effecting compression must be decided by further experience and the careful collection and comparison of a larger number of cases than the history of this operation has yet furnished. For myself, I am inclined to believe that compression by mechanical means can generally be so managed, as to accomplish the object with greater certainty and in the shortest time. In the two cases where I assisted in making digital compression, I found it difficult to control perfectly the circulation, but for a very short time. The sensibility of the thumbs or fingers soon become blunted, and before the operator is aware of it the circulation is going on through the tumor. And then, however carefully the hands of one assistant may be changed for another, it can seldom be accomplished without a few pulsations escaping underneath the fingers.

I apprehend the principal difficulty found in the use of mechanical compression has resulted from the faulty arrangement of the counter-pressure, which has been usually made, as in Dupuytren's compressor, by a pad applied to a small surface on the limb opposite the artery. By this arrangement the limb is pinched between two points, which would in a little time naturally produce so much distress as often to be intolerable to the patient. By the arrangement I made use of, it will be observed that the whole broad surface of the thigh and nates received the counter-pressure, which was so diffused from the point of compression over the artery that no pain of any severity was produced. All, or most of my patient's suffering was referred to the leg, and evidently proceeded in some manner from suddenly depriving the limb of its supply of blood. The pain was different from that produced by pressure upon the nerve. It is singular that the limb felt to him as if burning up; and although the flow of blood was so retarded, and the heat somewhat reduced, yet he felt, as he expressed it, as if the vessels were filled with currents of liquid fire.

I also attach considerable importance to the faithful performance of gently rubbing the limb from below upwards, until after the establishment of the collateral circulation. The rationale of this proceeding is evident, but I am not aware that it has been practised by any in previous operations of this kind.

---

* The rapidity of this cure was undoubtedly due, in some measure, to the previous consolidation of the popliteal aneurism, thereby interrupting the circulation at that point, and establishing a collateral circulation about the knee joint.

Another merit which may be claimed for this method of making mechanical pressure, is its perfect simplicity. No complicated apparatus involving expense or delay is required; but it can be quickly and easily arranged in any place from materials always at hand. An inclined plane can be easily made in any room by fastening over the bed a board, secured to posts nailed to the foot and head of the bedstead, and inclined at such an angle as may be found most convenient and effectual for the purpose required. A strip of wood about an inch square and as long as will reach from the limb of the patient to the inclined board above; a little adhesive plaster, always within reach of the surgeon, and a little mechanical ingenuity will furnish all that is required.

It is affirmed by Broca that "compression by the fingers is the most efficacious and least dangerous of all, as it enables us to act only on the artery, avoiding the nerves and neighboring veins, and sparing the skin." In the preceding case I found the nerve and veins were not involved in the pressure any more than when it was made by the fingers, and the mechanical compression, so effectually used, produced not the slightest injury to the skin.

In conclusion I would ask, what objection can there be to a trial of this method before resorting to the knife? When we see, as in the above case, a speedy cure so easily and safely accomplished, why not give the patient the benefit of such a chance in his favor before endangering his life by applying the ligature? Although the method seems to have lost favor in Bellevue Hospital, I trust that the treatment of aneurisms by compression will there, and elsewhere, in the language of a recent writer, "resume a preëminence it ought never to have lost."

ART. VII.—*Report of the Proceedings of the Medical Societies and of the Practice of the Hospitals in New York; prepared for the* NEW YORK JOURNAL OF MEDICINE, by GEORGE F. SHRADY, M.D., Resident Surgeon to the New York Hospital.

NEW YORK HOSPITAL.

IN continuation of this subject under this head in the last number, I propose to begin this article with the treatment that is now adopted in this institution for burns. As far as I am aware, the practice is not an old one, and originated, or at least was first used in the Massachusetts General Hospital. Its adoption into this institution is quite recent, and was first employed by Dr. Gurdon Buck, the senior surgeon. It consists of a paste of gum acacia ℥iij., g. tragacanth ℥j., water 1 pint, molasses ℥j., applied with broad, flat camel's hair brush. It follows out the old indication, differing from the other modes of treatment in the materials employed. Until lately, the carron oil has been used, and with excellent results, but this, so to speak, new application has one great advantage over it on account of cleanliness. The molasses seems to prevent contraction of the new covering. The first application is made immediately on admission into the hospital; this dries in the course of an hour or two, and is then followed by another; generally four applications are sufficient to form a firm, unyielding, non-contracting scab. These scabs, in the course of a couple of weeks, crack and peel off, leaving either a granulating surface underneath, or a mere rubefaction, according to the severity of the burn. The granulations, if such there be, are treated with Turner's cerate. It has been tried in a great many cases, and each application seems to prove its utility the more. All the surgeons are agreed upon this point, that it is *the* best remedy for such cases. When pus accumulates underneath the covering it is evacuated by small punctures.

Since the last appearance of the report, Drs. Van Buren, Parker, and Markoe have been in attendance.

During the service of Dr. Van Buren in the second surgical division, there were performed four amputations, three of the leg and one of the thigh. The subjects were all adults except one, a boy whose leg was amputated for railroad injury. The amputation of the thigh was performed for disease of the knee-joint, the circular method being employed; the stump left open to heal by second intention. It has closed over with unusual rapidity. Two of the legs amputated were primary operations, consequent upon compound fracture. The third amputation was secondary. In one of these cases of primary operation the lateral flap method was resorted to, and the edges consequently were brought together by sutures. This case terminated fatally by pyæmia.

In the treatment of the stumps all but one was left open, to heal by second intention. Those that have been left open are all doing remarkably well.

Dr. Van Buren also, within the last two weeks, reduced a dislocation of femur into thyroid foramen by simple manipulation, the patient being profoundly etherized. On the first attempt, by moderate extension with gradual adduction of the dislocated limb, pressure outwards being made over the head of the bone at the same time by an assistant, it glided outwards across the front surface of the body of the ischium into the ischiatic notch, the limb assuming the usual position and characteristic features of this dislocation. By appropriate manipulation, that is, that which is generally spoken of as Reid's method, the head of the femur was readily dislodged from its new position, but instead of gliding into the acetabulum, it passed again across the body of the ischium into the thyroid foramen.

On the third attempt, by extension and adduction, the pressure over the head of the bone being applied on this occasion so as to lift it upwards and outwards *towards* the acetabulum, it glided readily into its place with a distinct crunching sound, which was distinctly perceived by those in the immediate vicinity of the patient. This was all accomplished with very moderate force, and the whole procedure did not occupy ten minutes. The two lower extremities of the patient were then bandaged together, and his recovery has been prompt and perfect. On the ninth day he was able to walk across the ward before the students, without limping or any expression of pain. In connection with this case, Dr. Van Buren mentioned to the class in attendance that he had encountered this same feature, viz. the gliding of the head of the femur outwards and inwards across the front surface of the body of the ischium during efforts at reduction of dislocation of the thigh into the thyroid foramen, in two similar cases, both of which recovered promptly, and he ascribed it not so much to extensive laceration of the capsular ligament of the joint, as to the great mobility of the parts allowed by the complete muscular relaxation produced by the etherization. In this case the features presented by the thyroid dislocation were : abduction and slight flexion of the thigh with lengthening of the limb to the extent of $\frac{3}{4}$ of an inch ; bowing forwards of the lumbar vertebræ; a distinct prominence at the upper and inner part of the thigh ; and a deep depression over the usual position of the great trochanter.

Dr. Parker during his term of service removed the half of the lower jaw for phosphoric disease of right side. An incision was made along the lower margin of the jaw from just below the ear, as far as the symphysis menti. The periosteum was dissected up from the bone along with the flap, the periosteum on the internal surface also being dissected off, the bone was disarticulated, the section anteriorly at the symphysis menti being made by the chain saw. The periosteum, as far as could be ascertained, was preserved entire. The wound was brought together by sutures and emp. adh. The patient is a German, aged 22, and has been an employee in a match factory for eight or nine years. The commencement of his trouble he dates back three months, following the extraction of a couple of molar teeth on the lower jaw. After the operation, the wound healed for the most part by first intention. It is now about five weeks since the operation, the openings that have existed are nearly closed. General health is very good. There seems to be a tendency for the disease to extend itself on the other side as is manifested by tenderness and swelling of that side of the face with a spongy condition of the gums in the neighborhood. The bone when removed was found to be covered with the pumice stone material described by Mr. Stanley.

Dr. Markoe has operated on another case of morbus coxarius, exsecting the head of the femur, in a boy eighteen years of age. The plan of conducting the operation was very like the former, by a T incision over the trochanter, exposing the head of the bone from behind and separating it by means of the chain-saw. The head of the bone thus removed was found to be softened and diseased, as was also a considerable surface of the cavity of the acetabulum.

The wound was brought together by sutures. The disease of the hip was of short duration, it being only six months ago since he first had any trouble. Soon after admission, he began to run down, an abscess forming in the vicinity of the affected hip, and opening on the external aspect of upper third of thigh. After the operation the patient seemed to do very well for a couple of weeks, having a good appetite, and keeping up his strength well, when he began rather suddenly to lose ground, and died of exhaustion soon after.

The little boy operated upon some time ago is now able to get about.

BELLEVUE HOSPITAL.

Report of Four Cases of Fracture of the Vertebræ. By CHARLES PHELPS, M.D., House Surgeon to Bellevue Hospital.

Case 1.—Fracture and Luxation of the Seventh Cervical Vertebra—Paraplegia—Death—Autopsy. (Service of Dr. Wood).—Mathew Boynton, stableman, born in Ireland, aged 30; intemperate; well nourished, and of good constitution, admitted June 14, 6 P.M. Dr. Jno. M. Farrington, house-surgeon.

History.—In going down a flight of steps at 7 o'clock the evening previous, his foot slipped and he came down upon his back, and thus slid to the bottom. He was insensible for the moment. When consciousness returned he felt no pain, or other evidence of injury, except numbness and incapacity for motion. He had no headache, dizziness, or vomiting, and has had none since. He had not thought that he was much injured.

Examination.—He was found to have complete paralysis and anæsthesia of the entire body below the third rib anteriorly, and below the fourth, posteriorly. The decubitus was dorsal, head and neck thrown forward. The neck anteriorly was not tender, nor upon slight manipulation posteriorly. There was no difficulty in deglutition. The expression of the countenance was not marked except by a slight tremulous motion of the facial muscles. Sensation was perfect in both arms, but there was no power of motion in the left, limited in the right. The respiration was purely abdominal. The temperature of the body was not affected. The pulse at the left wrist was of average frequency and fullness and not very markedly compressible. At the right wrist it was smaller and more compressible. The penis was strongly erected; neither feces nor urine had been passed since the accident.

Progress of Case.—June 15, had some motion in the left arm; paralysis and anæsthesia not otherwise diminished. A red spot, nearly two hands' size, was observed upon the left nates, and vesication in the fissure near the extremity of the coccyx. Ordered collodion and soap-plaster to the nates, and s. s. morph. gr. [1] every two hours. P.M.—Dozed considerable through the day. *Marked increase of temperature all over the surface of the body*, with some redness of the skin; purplish spot, the commencement of a slough low down in the cleft of the nates. To continue ss. morph. 6 P.M.—Complained of "smothering;" of the clothes pressing upon him where there were none; of a hand upon him; but soon breathed easily again. Speech quick and abrupt.

June 16, A.M.—Retains nourishment only in very small quantities; tympanites considerable; general condition otherwise not perceptibly altered. Purple spot commencing over the third or fourth lumbar vertebra. Ordered, enema, s. s. morph. continued. P.M.—Respiration 10 in the minute, and has been about that since admission.

Enema acted promptly and effectually; has taken no nourishment, cannot retain the beef-tea. This morning there was some hæmaturia; none this evening. 7½ P.M.—Great dyspnœa; bronchi and trachea filled with secretion. Emetic of mustard given immediately, followed by draughts of tepid water, without effect; fauces and pharynx tickled with great assiduity and perseverance, and electricity resorted to with only slight relief. The paroxysm of dyspnœa, last evening, unlike this, as it appeared spasmodic; commencing suddenly, was sufficiently intense to redden the face purple, but disappeared entirely in a very short time, and left no trace behind.

June 17th, A.M. and P.M.—Nothing new in general condition; dullness in lower portion of right chest; some effusion in bronchi, but no dyspnœa. The incipient bed-sores not further developed; some appetite—delirious at times through the day. 7 P.M.—Entire anæsthesia and paralysis of both arms; not paralyzed early in the afternoon; great tympanites; urine high colored; priapism always induced by passing the catheter. S. s. morph. has been continued all the time; patient conscious and sane. 9 P.M.—Exhibits no signs of consciousness; eyes suffused; convulsive movement of lower jaw; body still hot; pulse full and strong.

11¾ P.M.—Died; has remained up to this hour in the condition in which he was last seen. Had no convulsions; death occurred quietly.

Autopsy.—Fracture of body of seventh cervical vertebra; fracturing off of the right transverse and superior articular processes at its base. Complete disruption of the ligamenta subflava. The fracture of the body of the vertebra was transverse and complete—and the vertebra was dislocated backward; cord not lacerated.

The *brain* exhibited no very marked morbid appearance; there was moderate congestion, and the medulla oblongata was rather more strongly congested than the rest of the encephalon. The *heart* was flabby and contained only a small fibrinous clot. The other viscera presented nothing of note in connection with the history of the case.

Case 2.—Fracture of the body of the tenth dorsal vertebra—Operation for the elevation of the depressed portion—Large effusion of blood within the theca—Death—Autopsy.—(Service of Dr. STEPHEN SMITH.)—David King, derrick-man, born in Ireland; age 41; temperate; of good constitution, and of robust appearance; large frame, and well nourished. Admitted Oct. 12th, P.M.

History.—Two hours previous, when riding up 9th avenue, he was thrown from a cart, and struck in some manner upon his back; was not rendered unconscious; did not feel hurt until some one attempted to take him up; then found that he was paralyzed, and that the motion caused him intense pain. Could not tell whether the injury he had received was from striking upon some projecting point; or indirectly by force transmitted from a blow received elsewhere.

Examination.—When admitted he was collapsed; pulse too frequent and feeble to be counted; respiration 18 in the minute. Paralysis and anæsthesia of the entire body was complete below the sixth intercostal space. There was moderate priapism. The temperature of the body was normal. The only subjective symptom was severe pain in the back of the neck, and pain, numbness, and tingling in the arms. Upon examination, a space between two of the spinous processes of the dorsal vertebræ was detected, in which two fingers could be placed; no corresponding superficial mark of injury was visible. Nothing abnormal could be discovered in the cervical region. Though motion was productive of severe pain in the back, the pain did not appear to be so excruciating as frequently happens in spinal injury. The urine was drawn by catheter and a free administration of stimulants and an anodyne ordered.

Progress of Case.—Oct. 13, A.M. Pulse 112, and of considerable force; respiration 26 and mainly abdominal; the temperature of the body and of the lower extremities was exalted; anæsthesia had extended slightly upward upon the body to the fifth rib, and the pain and numbness of the neck and arms had decidedly increased. The penis was not erect, but very easily excited on irritating the spine. The urine was again drawn by catheter, and the treatment of last night continued. P.M.—Sloughs had commenced upon the heel, and upon the ball of the great toe of the left foot, and over the external malleolus of the right ankle. Seen by Drs. Stephen Smith, J. R. Wood and Crane, and in consultation immediate trephining of the vertebral column was determined on a safferding a possible chance for the patient's recovery.

Operation.—The operation was performed in the ward by Dr. Stephen Smith. Chloroform was administered and an incision of 6 inches in length made over the spinous processes of the dorsal region. An extravasation of blood nearly the length of the incision was found in the subcutaneous tissue, and a depression of a lamina upon the right side of one of the lower dorsal vertebra detected. An unsuccessful attempt was made to divide the lamina upon the opposite side by a rotatory saw; the trephine was then applied to the same, and afterwards Hey's saw. The depressed portion of lamina was pulled out by a duck-billed forceps, and through the opening thus made flowed from 6 to 12 oz. of dark, extravasated blood.

The patient was entirely under the influence of chloroform during the operation, lying upon the side; respiration free, and all the time satisfactory. No benefit resulted from the operation, and death occurred soon after.

Autopsy.—Fracture of the body of the tenth dorsal vertebra upon the right side extending from the base of the transverse process half-way to the mesian line anteriorly, without displacement—fracture of the arch of the vertebra upon the right side with depression; and extravasation of blood to a large amount; extending from the lower cervical vertebra to the sacrum. Considering the increasing paralysis, this extravasation was probably still extending upward at the time of the death of the subject.

(To be continued.)

BROOKLYN CITY HOSPITAL.

Surgical Cases treated at the Brooklyn City Hispital. JOSEPH C. HUTCHISON, M.D., Attending Surgeon. Reported by Francis D. Cunningham, M.D., of Richmond, Va., House-Surgeon.

Case 1.—*Gunshot-wound—Ball entering the right orbit—Recovery.*—M. C., aged 23; born in Ireland; milkman—healthy. Admitted May 13th. Whilst engaged in a quarrel with a companion, was shot with an ordinary single barrel pistol with a quarter inch bore. His antagonist was standing directly in front of him, and the pistol was held so close to his face that the powder was scattered over its entire surface. After being shot he seized the pistol, knocked his enemy down with it, and beat him with a "swill stick" so severely that his skull was extensively fractured, and he died in three hours. Having beaten his enemy to his satisfaction, he walked several blocks to a drug store, to get his wound attended to. Whilst at the drug store he began to get sick, and vomited, continuing to do so until he was admitted into the hospital, one hour after the injury was received, at which time he was perfectly rational, and gave a true account of the affair. When admitted pulse was 60 and quiet, slight nausea, pain located in the eye alone. The eyeball considerably protruded, and lids much ecchymosed. Small effusion of blood in the anterior chamber, can see out of the eye, but says everything has a reddish tinge, when the lid is raised. This protrusion of the ball existed for some time prior to the injury, and the eye had twice been operated on for a tumor near the inner canthus. A probe passed into the wound goes into the orbit 2¼ inches. The external wound being about ¼ inch below the outer canthus of the eye, and the track of the ball corresponding in direction with the outer wall of the orbit. At the above depth the probe touched a rough substance, but whether it was exposed bone or lead was uncertain, and it was thought best to await further developments.

May 14.—Nausea with vomiting continued all night, but at 6 A.M. took some tea and was quiet afterwards. Ordered mercurial cathartic and cold applications to be continued on the eye, which was much swollen and painful; 4 leeches to the temple. Senses and pulse undisturbed. 15th.—Slept quietly, without anodyne, last night. Swelling about the lids somewhat less, but considerable chemosis of the conjunctiva which was freely scarified. Slight suppuration about the external wound. Pulse 60, and full; senses undisturbed. 17th.—Rested well during night; swelling and pain about the eye less; now complains of pain in the temporal fossa, which is increased by pressure. Pulse 58 and slightly intermittent; bowels freely evacuated, and patient ordered to be kept quiet. 19th.—Pain in temple severe, whilst that in the eye much less; otherwise comfortable, and takes a small amount of food with relish. Conjunctiva scarified on account of the chemosis. Cold water dressing. 21st.—Eye about the same. Fluctuating point in temporal fossa, above the zygoma, opened and about ʒij pus escaped. A probe introduced into the opening shows the abscess to have been superficial and limited. 23d.—Chemosis persistent; leeches to temple, and scarifications. 29th.—In spite of active antiphlogistic remedies, the inflammation has persisted and produced sloughing of the cornea. No symptom of any trouble about the brain.

June 10th.—Contents of ant. chamber evacuated on 5th and much relief from pain experienced. Chemosis still extensive; general condition good. Pulse 60, and regular, and functions naturally performed. 18th.—Dr. Hutchison ordered poultice to the eye on 16th and the contents of the ball have been discharged; the inflammation still very active, and poultice continued. Some vomiting to-day, but no other symptoms of brain trouble. Complete loss of sensation of the integument supplied by the frontal branch of the 5th nerve. 29th.—Inflammation subsiding, and water dressing resumed. General condition as good as could be desired. Have now a view of a vascular tumor, occupying the inner canthus, and attached principally to the upper lid and extending back quite deeply into the orbit. From this time the inflammation about the part continued to subside, and the patient was discharged on the 22d July, having had no trouble about the eye for three weeks previously, and no new features having been disclosed as regards the precise locality of the ball. About the last of August, this man called at the hospital, but was not seen by me as I was out at the time. He informed the nurse, however, that he was following his occupation and had never had any trouble about his eye since he left the hospital, more than a month before.

Case 2.—Fracture of the sixth cervical vertebra from gunshot wound—Death on the 33d day.—James Mc. aged 26, born in St. Johns, N. B., healthy; admitted at $1\frac{3}{4}$, P. M., July 5th, 1858. At time of admission was much prostrated and bleeding quite freely from several wounds on the anterior surface of the neck, with complete loss of sensation and voluntary motion below a line passing around the body on a level with the nipples. Found several contusions and abrasions slight in character, about the face, sacrum and left gluteal region, the principal wounds being in the neck, and presenting the following characters. In a horizontal line, on a level with the pomum Adami are three wounds, one on the right and two on the left side of the median line, the most distant (the extreme left) not being more than one inch from it. The wound on the right goes directly backwards ¾ inch. The middle one goes backwards and to the left 1¾ inch, and the one on the extreme left is 2¾ inches in depth and passes to the left of the vertebral column. No evidence of fracture of the vertebra obtained from the probe. The wound on the left was made by a ball of large size, and is irregular, the other two being probably made by wadding, as the entire face was blackened by the powder. Made a careful examination, but could not find any trace of the ball; concluded that it had penetrated the spinal column about the sixth cervical vertebra, as the nerves of the brachial plexus were also involved, as exhibited by partial loss of sensation and motion in the upper extremities. Does not cough or spit up any blood, but has constant and partly involuntary effort at deglutition. Though the wounds were bleeding quite freely, the large blood-vessels were not injured and the hemorrhage yielded readily to the application of ice-water about the parts. Whilst he was being brought to the Hospital, the feces were involuntarily evacuated, and when admitted there was considerable tendency to priapism. Mind perfectly clear, and says he has no pain except when his head is turned and then he locates it about the last cervical vertebra, but there is nothing unnatural to be observed about this region. Dr. Hutchison saw him at 3 P.M., and examined the wounds with the above result. Ordered ice to be applied to the wounds and perfect rest enjoined.

July 6th.—Pulse 98 and good; skin hot and dry; respiration, as yesterday, entirely abdominal. Slept about five hours during the night. No pain, but some stiffness about the neck. Urine drawn off with a catheter every eight hours. Priapism still present. 7th.—Pulse 78 and has a tendency to intermit. A slight reflex action excited in the left foot by titillation, none in the night. Complained of a sharp pain in the head in the afternoon, which lasted for 20 minutes. Ordered brandy ℥xij. in 24 hours. 8th.—Pulse 72 and more feeble. Slept very little during the night. No suppuration about the wounds, which are covered by a scab. Less reflex action about the foot. Complains of a difficulty in swallowing solids. Put on a water-bed, brandy, beef-tea, etc. Uniform heat of surface, sensibility and motion less in the arms. 11th.—On 9th, had several attacks of spasmodic action of the muscles of the head and neck, lasting from 5 to 10 minutes. On same day had several involuntary movements of the bowels. Urine removed by a catheter as before. 15th.—Involuntary evacuations continue, every 3 or 4 hours; urine commenced to dribble away to-day. Tonics and stimulants continued with tinct. opii *p.r.n.* to restrain the action of the bowels. Paralysis the same.

July 26.—The paralytic condition remains unchanged and the general aspect of the patient is that of decline. Owing to the impossibility of keeping him dry, since the 15th, bed sores of considerable extent have formed over the sacrum. Emaciation is quite marked, and the power of motion in the arms daily growing less. Expectorates large quantities of mucus and has sensation as if choking. Beef-tea, lager bier etc. 30.—Pulse 92 and quite feeble; complains much of the mucus in his throat; wounds healed. General condition not much worse, but the sloughs on the sacrum extending.

August 2.—Very much troubled with bronchial effusion, and dyspnœa so great that life is endangered from suffocation. Ordered carb. am. grs. v. every hour, which was followed by relief; pulse very feeble at the wrist and the temperature of the extremities beginning to decrease. Emaciation rapidly increasing, and ulceration occurring at the prominent parts of the body. This condition continued to grow worse, and death, which had been hourly expected for two days previously, occurred on the 6th, the patient being sensible and conversing to within three minutes of the time of his last respiration.

Autopsy.—Owing to unavoidable circumstances, a complete post-mortem examination could not be made. The wounds on the front of the neck were healed, and we proceeded to look for the injury of the spinal cord, by making an incision over the spines of the cervical vertebræ. Exposing the vertebræ, a ball was found in close contact with the base of the sixth spinous process on the left side. The ball was of large size, irregular in shape, and held quite firmly by the tissues in which it was imbedded. In its passage to this position it had passed to the inside of the large bloodvessels, struck the body of the sixth vertebra, separating the transverse process; removed a small portion of the articular process of the seventh, then across the vertebral canal to the junction of the laminæ, passing to the left and fracturing the bone in four pieces. After emerging, it stopped in the position above described. The ball passed between the points of origin of the seventh and sixth spinal nerves, destroying about one-third of the bulk of the cord. Here the cord had undergone disintegration and its structure could not be distinguished; imbedded in this soft structure were small fragments of the ball and pieces of bone. Above and below the seat of injury the attachments of the cord were very firm.

Case 3.—Penetrating wounds of thorax—Pneumo-thorax—Recovery.—Michael Mc. aged 50, Ireland; 8 years in United States; hod-carrier. Healthy. Admitted at 8 P.M., August 1st, 1858, with three stabs over the left and posterior part of the thorax, received two hours prior to admission. The superior wound was $\frac{5}{8}$ inch in length, and situated $\frac{1}{2}$ inch from the inner border of the scapula at a point opposite its middle. Its direction was downwards and slightly outwards. Wound No. 2 was $\frac{3}{4}$ inch long; $2\frac{1}{2}$ inches below and $\frac{1}{2}$ inch external to the lower angle of the scapula. Its direction was the same as that of the first, and its depth $1\frac{5}{8}$ inches. A third wound was situated three inches downwards and outwards from the angle of the scapula, $\frac{1}{2}$ inch long and its direction downwards and inwards $1\frac{3}{4}$ inches.

The cellular tissue surrounding the wounds was so extensively infiltrated with air that it was difficult to determine exactly between which ribs the various wounds communicated with the pleural cavity; but the presence of bubbles of air during expiration, at the openings of wounds second and third shows that they certainly did communicate with it. There was very little hemorrhage at time of admission, but much blood on the clothing worn by the patient at the time of injury. The wounds had been seen by a physician who had dressed them with sutures and adhesive strips, before sending him to the hospital. When admitted he was considerably prostrated, more from the shock than from loss of blood. Complained of pain on inspiration both posteriorly and anteriorly. Emphysematous crepitus over the left thoracic wall posteriorly and as far forward as the anterior border of the axillary space. Dressed the wounds with adhesive strips and patient made comfortable in bed, preferring to lie slightly on his right side. Pulse 92. Respiration 40 per minute. At 10½ o'clock quiet. Emphysema extended up the neck on left side. Left side tympanitic on percussion and respiratory murmur obscured by external crepitus.

Aug. 2d.—Slept very little during the night. Pulse 88. Respiration 28. Slight hemorrhage from the wounds during the night. Dr. Hutchison saw him at 10 A.M. and found him in same condition as described for the night before, except that the pain was now located principally in front, just above the left nipple. Emphysema more extended but still confined to left side. Dr. H. ordered twelve leeches at the seat of pain, and hydrarg. subm. gr. j., pulv. opii gr. ½, in pill every 4 hours. Some slight tendency to cough; no expectoration. At 5 P.M. had an attack of dyspnœa when respiration went up to 40, and pulse 92. The attack subsided in half an hour, and at 8 P.M. pulse was 88, and respiration 26. Respiratory murmur heard very feebly on left side, and puerile on right. 5th.—Gums touched and mercury stopped; no change in the physical signs. Some suppuration going on about the wounds. Very little pain on inspiration and the lung seems to be perfectly filled. Some diarrhœa, which was checked by opiate enemata. 6th.—Some inflammatory action about the wounds and a purulent collection at the middle one evacuated. Respiratory murmur feeble on left side, but heard over the whole lung. On the right it is still somewhat puerile. No cough nor expectoration. Emphysema disappearing, but well marked posteriorly. 8th.—Considerable purulent discharge from the wound. Applied a suitable compress to prevent the collection of pus in the cavity which is outside of the thoracic wall. 10th.—Dressings answer the purpose and wounds healing. Emphysema much less, and respiratory sounds improving. No pain, except a slight soreness about the wound. 12th.—No discharge from the wound. Very slight emphysema about the seat of injury. Respiration performed without pain and a healthy murmur heard over both lungs. The wound healed kindly by granulation, the condition of the patient continued to improve, and on the 18th he was discharged.

Oct. 1st.—Saw Michael Mc.; has been following his occupation since the third day after he left the hospital, and has had no trouble from his wounds further than a slight pain, when the latissimus dorsi muscle is forcibly brought into play. No trouble about the lungs at all.

Cases 4 and 5.—Hemorrhage from the ear—Concussion of the brain—Recovery.—Henry P. aged 15; Brooklyn. Healthy. Admitted July 26th, 1858. About one hour prior to admission (11 A.M.) this boy jumped from the steam cars whilst in motion and was picked up insensible from the force of the fall. There was considerable hemorrhage from the left ear and both nostrils, continuing after admission, with vomiting every few minutes. When admitted, pulse 72 and feeble; skin cold; pupils sensible to light, could be so far aroused as to open his eyes, and when pain was inflicted the nervous sensibility could be excited; particularly when pressure was made on a contusion situated over the left frontal protuberance. Sinapisms to the extremities and abdomen, and made comfortable in bed. At 4 P.M. could be aroused so as to tell his name. Oozing of blood still continued from the ear, and a careful examination made certain the fact that it was not from the external ear. Pulse 100; skin warm. Respirations 30. Vomiting continued up to 11 P.M. when he became quiet, after passing his urine voluntarily.

July 27.—Started up in a fright in the morning. Rational and gave an account of the accident. Much inclined to sleep and vomited 3 or 4 times during the day after taking a little food. Pulse 80, and normal in character. Ordered cath. 31st.—No bad symptom since last date. Is a little deaf and complains of some pain in left ear from which there is a slight purulent discharge.

Aug. 4th.—Discharge from the ear ceased. Hearing improved, but not natural. Eloped.

Case 5.—John M——, aged 24, Brooklyn, mason; healthy. Admitted at half-past seven P.M., August 19th, 1858, having been injured by a fall from a scaffold about two hours previously. The scaffold from which he fell was about thirty feet in height, and the ground underneath exceedingly rough, and covered with fragments of broken bricks. He was insensible when picked up, and bleeding very freely from the left ear and both nostrils. When admitted, the hemorrhage was quite profuse—patient unconscious, but sensible to the infliction of pain. Pupils responded to the action of light. Respiration 32 and stertorous. Pulse 60 and feeble; had vomited before admission, and continued to do so for about an hour. Found a scalp wound on the right parietal protuberance, exposing the bone for about one half inch; whole face and left ear much bruised with several slight abrasions; both eyelids much swollen and ecchymosed. No fracture of skull detected on manipulation, and no other injuries observed except a slight contusion over the hip and sacrum. Two hours after admission he could be so far aroused as to put his tongue out, when told to do so, and make incoherent efforts at speaking—hemorrhage from the ear, venous, and continued during the night, seven or eight ounces of blood being lost. As in Case 4, the bleeding could not possibly have come from the external ear, as the wounds about it were very slight, and did not extend into the canal. 20th.—Restless and delirious during the night; Dr. Hutchison ordered ice to the head, and a mercurial cathartic. At 2 P.M. became more conscious, called for a vessel to pass his urine, and during the afternoon recognized an acquaintance. 21st.—Inclined to sleep, but sensible when aroused. So very restless that he has to be secured in bed; vomited frequently during the night; sinapisms to body and legs—saline cath. 22d.—Very slight sanious discharge continued from the ear; easily aroused, and converses rationally; has no pain about the head; pulse 88, and regular. Dr. H. ordered tinct. aconit. gtt. v. ter in die. 25th.—Improving, occasional pain in the head, but slight.

Sept. 4th.—Has improved very much, has now and then sharp pain in the head, lasting a few minutes. Complains mostly of the "lightness in his head;" is perfectly rational, but somewhat incoherent in his speech when he begins to converse. The pain in the head, when severe, relieved by a blister on the back of the neck. Dr. Isaacs, who had now come on duty, ordered the bowels to be kept open by hydrarg. mass. followed by ol. ricin. He is a little deaf in the left ear, but thinks it is improving. The left eyelids have a paralyzed appearance, but not at all marked. 18th.—Treated by blisters, repeated, on the back of the neck; has continued to improve, and since 14th has been walking quite steadily about the ward. Thinks the "lightness" about the head improving, and feels much more confidence when walking without assistance. On this day his friends removed him home.

Oct. 18th.—Had a visit from the above patient. He has improved steadily since he left, without any treatment; is able to take short walks in the street, alone. Hearing has continued to improve, and the eye is natural, but still has the same feelings about the head, and some unsteadiness in his gait.

Case 6.—Anomalous collection of serous fluid in the cellular tissues, from injury.—Patrick B., aged 22; Ireland; five years in United States; healthy; laborer. Admitted June 7th, 1858. with contusions and abrasions over left lumbar region, caused by the caving in of a bank of earth. No bones were broken, and the patient walked some distance to the hospital. Injuries apparently slight, and simple dressing ordered. Rest.

June 10th.—Abrasions healed under above treatment. On manipulation, can detect fluctuation in the left lumbar region. The fluid sufficient to produce prominence of the part, diffused, but confined to the left side of the median line. No constitutional disturbance since the injury was received, and no pain, heat, or redness about the swelling. A compress applied to promote, if possible, absorption of the fluid. 13th.—Slight increase in the effusion; general condition the same, and patient able to walk with ease. 17th.—Fluctuation extends now from median line posteriorly to the anterior superior spinous process of the ilium, and as high as the last rib. Over the gluteal region and trochanter, there is a bulging of the integument, which feels like a bladder filled with fluid. An exploring needle was introduced by Dr. Hutchison, at several points, and its withdrawal was followed by pure serum. Some heat about the part, and cold applications ordered. 20th.—Erysipelatous blush about the seat of injury, with considerable constitutional disturbance. Ordered quinine, grs. 2, ter in die, and tinct.

iodine to be applied around the margin of the inflammation. Cold appliances continued. 22d.—General condition same. Dr. Hutchison introduced a trocar in the most prominent part of the fluctuating tumor over the gluteal region, and with "Wyman's pump," drew off about a quart of serum containing some pus. The operation was followed by great relief to the constitutional disturbance, and a compress was adjusted so as to bring the walls of the cavity together. 26th.—Small collection still in the gluteal region, and considerable purulent discharge from the opening made by the trocar, amounting to several ounces in the course of twenty-four hours. Compress, good diet, etc.

July 3d.—Wound healed, and all inflammation subsided; some fluctuation still over the gluteal region at the most dependent portion. General condition good. 6th.—Dr. H. made another opening below the former one, and evacuated about two ounces of serum, followed by a small quantity of pus. Compress. 13th.—Wound healed, and scarcely perceptible sensation of fluctuation, obtained from manipulation. Compress continued. 21st.—Considerable induration about the seat of the late fluctuation, but the parts seem otherwise healthy, and the patient complains only of a slight stiffness about the lumbar region. 31st.—Discharged cured.

Case 7.—Fracture of the femur above the condyles—Splitting of the lower fragment extending into the joint.—Recovery.—Albert B., aged 22; Germany; three years in United States; baker; healthy. Admitted Dec. 7th, 1857, with transverse fracture of the right femur, just above the condyles, with lower fragment fractured longitudinally, and opening into the joint. Injury occurred about one hour prior to admission, from a fall down a hatch, a distance of ten feet, the right knee coming first in contact with the pavement. Considerable effusion around the joint, and about one inch shortening at time of admission. Applied Physic's splint, and evaporating lotions to the knee. 15th.—Swelling and pain about the joint disappeared. Ordered lotion to be discontinued, and extension of leg made to full length.

Jan. 5th.—Dr. Minor, who had then come on duty, took off the splint and made flexion at the knee through one-eighth arc of a circle, without pain. Union quite firm, and no shortening appreciable. 18th.—Splints permanently removed. Ordered active and passive motion; very little deposit about the seat of fracture, and union very firm.

Feb. 5th.—Motion continues to increase, and allowed to go about on crutches.

March 6th.—Motion in the joint almost perfect in extent, but occasions some pain when forcibly employed. 17th.—Discharged cured, with perfect motion of the joint, and no shortening or deformity.

LONG ISLAND COLLEGE HOSPITAL.

(*Report* by John G. Johnson, M.D., Adjunct Surgeon.)

Case 1.—Caries of the hip-joint—Total resection of caput femoris and partial of acetabulum—Recovery with half-inch shortening and without deformity. Frederick Charles Schroeder, a fine looking boy, aged four years and six months, was received at the institution on the 24th of June. His father died, most probably, from phthisis of the lungs ; his mother, a most robust and healthy woman, is still alive. Up to the present disease, the little patient enjoyed the best possible health. Though he has repeatedly met with a fall, yet it remains dubious whether the disease has been caused by traumatic or other influences. About twelve months previous to his admittance into the hospital, a slight lameness was noticed, and the disease went steadily on until it reached its present degree. During the intervening time, the patient was attended by a physician, yet without any check to, or amelioration of the disease.

Status morbi.—Consititutional disturbance, with frequent pulse, hot and dry skin, coated tongue, thirst, want of appetite, constipation and saturated urine. During night his rest is frequently disturbed by painful jerks, that make him halloo loudly, leaving entirely free intermission of short duration. Immobility, soreness and tumefaction of and around the right hip-joint. The affected extremity is much adducted and inverted, and flexed in both hip and knee joints, which position is unalterable even by the aid of chloroform. The adductor and flexor muscles of the thigh are tense and contracted, projecting like cords. The pelvis is raised on the affected side, and turned on its transverse diameter, accounting thus for the higher position and posterior projection of the right nates as well as for the increase of the angle of inclination. Spine is bent, both laterally and anteriorly. The lateral curvature extends over the whole spine ; the anterior curvature is located at the posterior lumbar part, and depends evidently on the transversal rotation of the pelvis.

At the thigh, about two inches below the large trochanter, there is a small fistulous opening, from which but a small quantity of sero-purulent matter is discharged. The least moving of the joint clearly evinces crepitus. On introducing a finger into the anus, no morbid changes were discovered in the pelvic cavity.

Diagnosis.—Morbus coxarius in its third stage (perforation of the capsular ligament), caries of the articular surfaces, consecutive abscess and fistula and reflected muscular contraction. Dr. Bauer directed a free dilatation of the fistulous tract, to eliminate the subfacial accumulation of pus. This being done, a considerable quantity of matter, greatly decomposed and with the smell and chemical reaction of sulphuretted hydrogen, escaped; the parts were finally covered with poultice.

On the 26th of June, the patient was again closely examined under chloroform. His constitutional irritation had then greatly abated, and the free discharge of pus had relieved the joint so much as to admit flexion and extension in a limited degree, whereas adduction remained the same. The denuded condition of the articular surfaces was affirmed by repeated crepitus, perceptible both by hearing and feeling, though it seemed but limited.

The question as to treatment was in this case of intense interest. Dr. Bauer, in qualifying his views, remarked, that he had no doubt as to a carious condition of the joint. The healing process of nature was exceedingly slow and protracted. Before she would succeed in removing the disintegrated osseous fragments, the patient might become a victim to the material loss necessarily connected therewith or to pyæmia. The knife would do it in two minutes, and to all probability this would be the exigency after all. Yet as the patient had evidently improved under the treatment, was in a comfortable condition, and delay was not likely to injure his prospects, he should postpone the operation and give nature a fair chance. Any change to the worse would, however, alter his decision.

But under *all* circumstances the causes of the deformity should be disposed of, for if anchylosis should eventually ensue, the malposition of the extremity would be equal to uselessness; and he was, moreover, satisfied that the muscular contractions with their sequels were exceedingly prejudicial to the hoped-for results. Rest and proper position of the limb were, in his estimation, the best remedies in articular affection of whatever description.

The contracted muscles were accordingly divided; the limb, thus entirely relieved, was easily put in a good position, and with that the patient was secured in Dr. Bauer's wire thigh-splint. Besides the recumbent position and tonics, the best of diet was allowed, with ale, milk, etc., as drinks.

During the next fortnight the little patient's condition left nothing to wish for. He enjoyed the most perfect ease and comfort, and his appearance partook largely in his improvement, so that without close examination, nobody would have imagined that he suffered at all from so grave a disease.

These improvements thus recorded, proceeded steadily up to the 6th of August, when new symptoms of both local and constitutional disturbance set in. The environs of the joint became again more intumesced, the discharge decreasing simultaneously. Unrelenting fever with all its appurtenances devastated his system. The caries had evidently spread, judging from the extended crepitus. All that had been anticipated, had been fully verified. The time had at last arrived for active intervention.

Counsel and faculty agreeing with the attending surgeon upon the necessity of operating forthwith, if at all, as further delay would not improve the chances of recovery, the operation was performed in accordance on the 12th of August, by Dr. Bauer, assisted by Drs. Daniel Ayres, Johnson, Whaley and Dodge, whilst Dr. Byrne administered chloroform.

It commenced with an incision 2½ inches above the large trochanter, vertically descending 1½ inches below the same point and down upon the joint. The insertion of the glutæus muscle was then severed and the joint entered by a circular incision along the acetabulum. Ligamentum teres being already destroyed, there was no difficulty in dislocating the head of the femur and pushing it far enough through the wound to be sawed off—for which object the limb was strongly adducted and placed cross-wise with the other. But having ascertained that the caries descended more downward at the inside of the neck, an additional piece of bone about 1¼ inch in length was stripped of its periosteum and then also removed, so that the entire apophysis was taken away below the small trochanter. The acetabulum was subsequently scraped and cleared of all detritus,—the wound loosely filled with fine charpie, the patient replaced in his thigh-splint, with sufficient firmness as to retain position undisturbedly, and taken to bed. There was no bleeding worth speaking of, and no ligature was required. When examined, the caput femoris was found to be greatly diminished in size, brittle and carious along the neck down to the small trochanter, but the acetabulum was but slightly damaged.

During the subsequent days a moderate reaction ensued, but as to the local condition the patient felt perfectly comfortable. He has ever since progressed favorably and greatly improved in appearance and weight. By means of the said thigh-splint—by the way, a most invaluable invention for like cases—his leg has been kept well extended, so that its length is but half an inch deficient. The position is also good and the patient can raise it without difficulty. The wound is healed up to the size of a small pea, and is filled with healthy granulation and it discharges good and plastic pus. As yet the patient has not been permitted to stand or walk on his operated extremity, for obvious reasons, for the intermediate substance formed between the femur and the acetabulum is not yet sufficiently consolidated to bear the weight of the body. Whether the latter will be entirely of fibrous, or in part or entirely of osseous structure, and whether it will articulate or closely connect with the acetabulum, has not as yet been ascertained.

Case 2.—Arthromeningitis coxæ traumatica.—Failure of constitutional and derivatory treatment.—Cauteria useless and prejudicial—Violence of reflex symptoms—Their final subjugation by rest, position, division of contracted muscles and strychnine.—Richard Trottman, a boy five years and nine months old, came under charge of Dr. Louis Bauer on the 1st of September. His parents and relatives are strong and robust, and their health unexceptionable. Until his arrival in this country, Richard has been a strong, lively and healthy boy. His vivacity has often made him subject to accidents, yet he has never been hurt much. Some 2½ years ago, he fell into a basement and was badly bruised thereby; and although it remained uncertain whether his present disease was at all attributable to that cause, certain it is that, a few months after, he commenced limping and to complain of soreness in his right hip joint. The symptoms became gradually so intense as to alarm his parents. Medical aid was thus early procured, when it was advised to lay the child up, to blister and leech the affected joint; internal remedies were likewise resorted to. Nevertheless the disease, then pronounced to be hip-joint disease, grew worse, when moxæ and at last actual cautery where applied. All this, however, did not arrest its progress. The child, when reduced to a skeleton, and his constitution utterly ruined, was at last placed under care of Dr. Bauer.

Status morbi.—Great excitability and fear of examination; very much emaciated, pallid, and feeble; pulse 135 in a minute; skin hot and dry; tongue red, slightly furred; great thirst and no appetite. Slight tympanites and irregular bowels, constipation alternating with diarrhœa. Urine very much saturated, weighing 1017, as compared with water. No albumen, but abundance of uric acid and urates. Respiration accelerated, but lungs in healthy condition.

Right limb much bent in both hip and knee-joint, at the same time abducted and everted. Apparent elongation of affected extremity, with lateral declivity of pelvis ; flattened nates with three circular cicatrices posteriorly to the joint. Perfect immobility and painfulness of the right hip joint, more particularly on motion and pressure. Indistinct fluctuation along the posterior edge of the acetabulum, and of no great extent. Flexors and adductors dense and shortened, even under chloroform. All motions are being made on the healthy hip and the vertebral articulations, pelvis partaking in them. No morbid changes inside of the small pelvis, near the acetabulum.

It was furthermore ascertained that patient was almost entirely deprived of rest, the latter being constantly interrupted by sudden pains that put his limb into a regular tremor.

There being no other morbid changes about the joint and adjacent parts, the disease was pronounced to be *arthromeningitis coxæ traumatica*, 2d stage.

Prognosis not entirely unfavorable, the effusion being but moderate and not as yet purulent.

Treatment.—Liberal diet with milk, strong beaf-tea, or good ale, as drinks ; iodide of iron and quinine alternately, cod liver oil, etc. To commence with a mercurial aperient and 4 leeches at the affected joint.

Sept. 2d. Division of adductors and tensor vaginæ femoris, whereupon the extremity would be extended and slightly moved at the hip-joint. Patient placed in a wire-splint. 12th.—During the last ten days Richard has greatly improved. Appetite better, rest undisturbed and appearance changed favorably, more particularly in color and bulk. Pulse yet accelerated, especially *during the visits.* Treatment as before and to be continued.

Oct. 4th.—Since previous day, patient has complained of more soreness in the joint. He is more feverish and his appetite is lessened ; his rest has again been disturbed. Leeches to be applied and morphia at night if required. 14th.—No relief despite local depletion and morphia. On examination some bundles of the pectinæus muscle were found to be tense and unyielding ; their division decided on and executed. 15th, Rest and comfort undisturbed.

October 29th.—Again some uneasiness. Slight soreness in the joint, considerably augmented when moved. Moderate constitutional excitement. Antiphlogosis ; leeches, unguentum hydr. cin. with sedatives.

October 30th.—Symptoms increased, although the movements of the joint are easy and almost without pain. Pushing the femur against the acetabulum continues painful. Most prominent are the nocturnal pains. Patient halloos every five or ten minutes during the whole night, disturbing every one in the room. Ordered large doses of morphia to be given repeatedly when necessary, until rest is procured.

October 31st.—Change rather for the worse; treatment continued.

Nov. 1st.—No abatement of symptoms. Again leeches (4). 2d.—*No change.* Prescribed strychniæ nitras in combination with morphia. 3d.—Better in every respect. 18th.—Has steadily improved up to present date; no pains about the affected hip-joint either on pressure or motion. Good position and normal length of extremity. Constitutional condition satisfactory, and nocturnal pains vanished entirely. The patient permitted to sit up in his wire hose and take moderate exercise on crutches.

The items of the following cases have been taken from the private records of Dr. Bauer, which I give in his own words:

Case 3.—*Diastasis of the femoral head—Its spontaneous expulsion through the thigh—Subsequent caries of the neck—Resection—Recovery.* November, 1856. When at Cincinnati was invited by two of the leading surgeons of that city, to see a girl nine years old, suffering, to all probability, from hip-joint disease. They informed me that two years previously the child had fallen off a swing and hurt her right knee. Whilst under treatment for that injury she began at once to complain of pain in left hip-joint, the circumference of which was found to be intumesced and the limb moderately shortened. There was no trace of external injury. In the course of eight months an abscess formed in the front of thigh, discharging successively some shells of bone. She remained invalid all the time and had to be carried about. No relief had been obtained from various treatment.

On seeing her, found a well and blooming looking girl with remarkable obesity. Left extremity 1¼ inch shorter, turned outside, but otherwise in good position. Pelvis square; joint painless on moving and pressing, could push the extremity upwards and pull it down, thus decreasing and increasing its length. Crepitus on rotation. In front inverted fistulous opening of the size of a five cent piece; at its bottom sounded bare bone. Diagnosis—caries of apophysis of femur, head already gone, which met the approbation of the attending surgeons.

Proposed the resection of the carious bone; acceded to; performed the operation by single incision, dislocating the femur, sawing off the carious neck, and closing the wound by suture. No communication could be detected between the joint and fistulous opening, and it was, therefore, premised that the head might have been ulcerated through the capsule and still remain in the soft parts. Under this supposition, dilated the fistulous opening, took hold of the bone at its base and removed it. Though somewhat altered in shape by the constant action of pus, it could not be mistaken for anything else than the anatomical head, having parted at its cartilaginous juncture from the neck.

Thus far my diagnosis was corroborated by the condition of the neck of the femur being found carious and decapitated. Cannot look upon the case as hip-joint disease, almost all symptoms being absent characterizing that malady. Think that a diastasis was produced by the fall, but the patient being immediately taken to bed, prevented the displacement for some days, and then it was overlooked. The constant irritation of the parts by moving or perhaps the working of the head through the capsule brought on caries of the neck.

Have seen the patient since ; the wound is firmly closed, but the intermediate substance is yet too soft to bear the weight of the body, owing perhaps to her peculiar constitution that turns all food into fat. Ordered phosphates of lime, soda and iron.

Case 4.—Synovitis of left hip-joint—Progress of disease to caries—Perforation of the capsular apparatus—Exsection of caput femoris—Recovery.

June, 1855.—Received at the institution Michael McCartey, a former patient of Dr. Jarvis, Portland, Conn., who sent him on ; a fine boy, three years old, fair constitution. Mother a strong Irish woman ; father died of causes unknown. Had sustained a fall and limped ever since. All evidences of synovitis with effusion. Local antiphlogosis and rest in Hagedorn-Dzondi's apparatus (inefficient, don't know a better one as yet). Disease progresses steadily (Aug.) In October, 1855, abscess forming about the hip; made four incisions, relieving the patient materially. Detected crepitus in joint ; decided upon the exsection of the carious bone ; performed the operation with comparative ease. Found head of femur and acetabulum diseased ; scraped the latter. Put the patient back in the foresaid apparatus. Great trouble in dressing ; does not secure the rest of the limb, nor prevent its shortening. Wound granulates kindly and fills up. 1856.—Discharged patient as cured with about two inches shortening. Intermediate substance very short, but firm ; seems to articulate with the acetabulum.

Case 5.—Rheumatic periostitis of femur—Great similarity to hip-joint disease—Difficulty of diagnosis.—Service of Drs. Bauer and Whaley, William A. Marshall, aged eleven years, entered the hospital, November the 10th, 1858, giving the following history and symptoms :

He has always been a remarkably healthy boy. Four months ago, being then at a boarding school, he took a bath in a pond of fresh water. He had previously been playing about, and got in a profuse perspiration, when he jumped into the water. Did not experience any immediate bad effects therefrom. Next day, however, felt pain in his right hip, like "cramps," and could not lie on that side. Three days after could not leave bed. Two physicians pronounced it hip-disease, and told him he would recover with shortening of the limb.

Being carefully examined by the attending surgeon, it was found that the pelvis was raised, spine inflexed, nates very convex, plica higher, linea inter nates deviating from perpendicular, limb much flexed both in hip and knee, so much adducted as almost to cross the other, toes inverted, and the extremity thus apparently shortened some four inches. Joint movable ; neither tender on pressure, forcible extension or compression. The upper third of the femur much enlarged, and very tender (exclusive apophysis).

Under chloroform the contracted muscles unyielding. General health tolerable, although there is some emaciation of the whole body, to be ascribed to pains, want of rest and constitutional derangement. Dr. Bauer sets the case down as rheumatic periostitis of the femur, for the following reasons :

1. Bone is enlarged and tender on touch.
2. The cause is such as often to produce that disease with rheumatic character.
3. The joint is perfectly free.
4. The deformity, though very like that of hip-joint disease in the third degree, has been the same since the commencement, which is not the case in the latter, being preceded by apparent elongation, abduction and eversion of the effected extremity.

It was, however, admitted that the differential diagnosis of the like cases was exceedingly subtle, and errors are not only frequent, but excusable. Chloroform is indispensable for correct diagnosis in such cases.

For the relief of tension, a three-inch incision was made, which confirmed the opinion of Dr. Bauer, the bone being much enlarged, very dense, eburnated.

November 30th.—Since the incision has been performed, the patient has felt great relief, and his constitutional condition has obviously improved. It was decided to divide the muscles, and to reëstablish proper position and length of the extremity, which operation was accordingly performed by Dr. Bauer, whereupon the patient was placed in the "wire breeches."

At present (Dec. 8th), his form is good as well as his general health. He will leave the institution in a few days to await the reparative process nature may choose to employ. The case has been reported in connection with those on hip-joint disease, on account of the interest it presents with reference to diagnosis.

Case 6.—Arthro-meningitis coxæ traumatica—Effusion in the joint (second degree of hip joint disease)—Violence of reflex symptoms—Their prompt subjugation by subcutaneous opening of the articular cavity, division of contracted muscles, rest and good position of the affected extremity in the thigh splint of Dr. Louis Bauer.—Maria Tuthill, a bright and handsome little girl, four years and nine months of age, was brought as an in-patient to the College Hospital, and placed under the care of Drs. Bauer and Dodge on the 4th Aug. last.

A mere superficial glance would have impressed the observer with her being perfectly healthy, so strong and robust was her appearance. She was well nourished and rather fat ; her cheeks and lips were as rosy and her expression as happy and contented as to suppose her free from any trouble whatsoever. Having sustained a fall from a chair about six months previous to her reception, she immediately after commenced limping and complaining of pain about the right hip. Despite very attentive medical treatment the little patient grew steadily worse, until she arrived at her present condition.

Examination.—Declivity of pelvis towards right, projecting forward ; simple lateral curvature of the spinal column towards the same side; plica natis lower, the latter flattened ; linea inter nates oblique ;

right limb abducted, everted and strongly bent in hip and knee joints; heel raised half an inch from the ground; joint excessively tender on touch; very little mobility in the direction of flexion and extension, but more lateral; behind caput femoris there is a moderate and fluctuating protrusion of the capsular ligament clearly discernible by every member of the medical staff. Abductors and tensor vaginæ femoris very tense and contracted; right thigh half an inch smaller than the left; locomotion very difficult and limping. Maria puts her foot flat forward and outward on the ground and draws the left leg after (diagonal walk); right shoulder higher and forward.

The malposition of the right extremity remains unaltered under the full effects of chloroform. No crepitus discernible in the joint; pelvic cavity free from disease. General condition good; no fever of any account, but slight diminution of appetite. In addition, it was ascertained from her mother that she was restless during the night, skin hot and dry, partaking freely of cold drinks. Moreover, she was oftentimes frequently awakened by sudden pains, and would then scream out, but soon again resume sleep. There had been at no time any pain at the knee-joint.

Diagnosis as above specified. Prognosis favorable, on account of the good constitution of the patient, the local origin and short duration of the disease, and the absence of osseous disintegration.

An aperient and the application of three cups directed, to commence with.

August 5th, A.M.—The nurse reports that Maria had passed a very restless night, had slept but little, asked constantly for cold water, been very hot, dry and feverish, and repeatedly shrieked so loudly and violently as to frighten the other patients in the children's ward. Pulse still accelerated, face hot and flushed, urine high-colored, and tongue coated, no appetite for breakfast.

The aggravating phenomena being chiefly ascribed to the violence of reflex action, superinduced by the tension of the articular capsule, it was decided to open the latter subcutaneously, after Goyrand's plan, and to divide also the contracted muscles. The operation was performed accordingly by Dr. Bauer, and with the aid of chloroform, after which the limb could be moved in any direction; the fluctuation had vanished also, and the patient was then fixed in the wire apparatus. Aug. 6th.—Entire absence of pain; motion of joint easy, and without crepitus; limbs of equal length; had passed a comfortable night. 13th.—Since last record, patient has presented no noticeable symptoms. Has ever since slept well; enjoyed the most unqualified cheer and appetite, and she may be fairly pronounced well as far as her constitutional health is concerned. Local pain gradually decreasing.

Sept. 3d.—Taken out of the wire apparatus and carefully examined; general health, good; but a slight soreness remaining at the joint. No malposition of the limb, no fluctuation or crepitus at the joint.

In this condition the patient was discharged, Oct. 12th, at the request of her relatives.

Case 7.—Synovitis of the hip joint (third stage)—Contraction of tensor vaginæ femoris and the group of adductor muscles—Relieved by myotomy *and rest to the articulation.*—(Service of Drs. Bauer and Whaley.)—Ann Smith, a little girl, 5 years of age, and of tolerably healthy appearance, was received into the hospital on 5th of July, with an affection of her right hip. She was of Irish descent; her father had died of phthisis; her mother is a healthy and robust woman. Twelve weeks previous to her admittance she had fallen down stairs and hurt herself. Soon after she complained of pain in hip and began to limp. Sometime after, an abscess formed behind the joint, when she felt slightly relieved. Becoming, however, gradually deformed, she was placed in the Institution.

Examination.—Soft parts of affected joint intumesced; behind it a fistulous opening of the size of a pea, discharging a clear, soapy liquid, mixed with pus. Opening movable, neither inverted nor crested; indistinct fluctuation surrounding it. Limb shortened about 3 inches, attenuated, flexed in hip, adducted and inverted. Tensor and adductors strongly contracted. Pelvis raised on right side, and simple lateral and anterior curvature. Great pain on moving and pressing the articulation, but no nocturnal pain. Adjacent bones neither enlarged nor tender on touch. General health, tolerable; moderately emaciated. Appetite and rest, fair.

In considering the case, Dr. Bauer thought, that there could be no doubt as to the traumatic cause; scrofulous diathesis being marked neither by the present appearance of the patient or the history of her past life. The absence of crepitus indicated mere synovitis of the joint, the result of contrecoup. Most probably the perforation of the capsular apparatus, posteriorly, had been effected a month ago, and it was strange that an indifferent effusion should have given rise to the formation of an abscess in the areolar tissue, perhaps still connected with and supplied by the morbid secretion of the joint. The case belonged clearly to the third stage of hip disease, of which all attributes were manifested.

Treatment.—Local depletion by cupping, followed by the dividing of the contracted muscles. Rest of the articulation in the wire apparatus with proper position of the extremity. In fine, the best of diet, with tonics.

The operation thus delineated, was performed by Dr. Whaley with perfect success, the limb easily extended and secured as aforesaid.

From this time patient did well. Pain left off, the parts surrounding the joint gradually returned to their normality and the fistulous opening closed also. In August she was permitted to take some exercise in the walking apparatus, and September the 27th she was discharged, with perfect form and but little soreness of the joint when moved separately.

Case 8.—A little boy, 7 years 3 months of age, of feeble, pale, and emaciated appearance, was admitted June 5th, under charge of Drs. Bauer and Dodge. He is of English parentage, his father perfectly healthy, his mother also, except being occasionally troubled with a cough. One of their children is subject to epilepsy, but their youngest offspring presents all the attributes of a robust constitution.

Johnny has always been a feeble and sickly child—about a year before his admission to the hospital he sustained a fall, coming down with one knee under him, the other extremity slipping away. Soon he began to complain of pain about the knee, and shortly after was noticed to limp.

On admission, the patient was carefully examined whilst under the influence of chloroform, and the following notes taken. Some constitutional trouble, fever, skin hot, dry and inactive; pulse irritable, quick, and weak, 115 a minute; tongue coated, with red edge and tendency to dryness; thirst increased, appetite diminished; alvine evacuations irregular—either costiveness or diarrhœa. His features bore the mark of violent pain and agony—pallid face and colorless lips, with the additional signs of anæmia; respiratory organs free from disease; abdomen distended and tympanitic; the liver of larger size; remaining organs normal; urine containing no albumen, or any other evidence of derangement.

Right extremity almost perfectly immovable (at least, in as far as abduction and adduction are concerned)· flexed in both hip and knee-joint, slightly everted and adducted contractions of ext. vag. fem. and also to a moderate degree, of adductors. Attempt at moving the right hip-joint excessively painful, as well as pressure on its circumference—more particularly, however, behind—at the latter point, fluctuation was clearly discerned along the semi-circular line of the acetabulum. Although the pelvis presented great obliquity, and was therefore lowered on the affected side, the limb, nevertheless, and by virtue of its flexion, was considerably shortened.

Diagnosis.—Hip-joint disease in second degree, with effusion within its articular cavity.

Whether ulceration has already been established, and more especially the articular surfaces denuded from their respective cartilages, is a question to be decided after abstraction of the effusion by puncture or absorption. The effusion, however, not being considered of any great amount, it was decided to place the leg in Dr. Bauer's wire splint, and by securing perfect rest and position, to give the effusion a chance for absorption.

In order, however, to extend the leg, Dr. Dodge was requested by the attending surgeon to divide the ext. vag. fem. This therapeutical proceeding, supported by appropriate constitutional treatment, had not the desired effect of allaying pain and fever, both continuing progressively up to the 22d of same month.

The pain was not only local and continuous, but periodical and violent, very like electric discharges through the whole course of the nerve, disturbing the patient's rest at night, and causing him to shriek out with such vehemence as to be heard throughout the establishment.

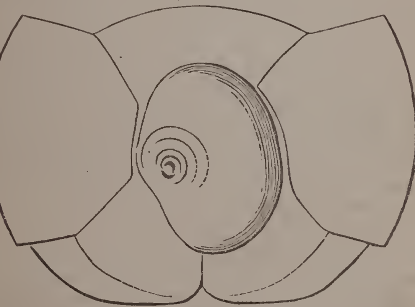
Dr. Bauer then proceeded to enter the joint by a small trocar, posteriorly and superiorly to the large trochanter, by means of which he abstracted purulent fluid, which released the immobility of the joint, and on motion, the denuded condition of the bones was clearly proved by crepitus. This seemed to give some slight relief, but very soon, the symptoms, both constitutional and local, increased in violence, fluctuation being discernible all around the joint, and the system failing fast—under these circumstances, consultation was held with the other gentlemen of the medical staff, and the free opening of the joint, together with the removal of all carious bone, decided upon, although but temporary relief could be expected. The operation was accordingly performed, and in entering the articular cavity, Dr. Bauer found not only the head of the femur and acetabulum denuded, but the latter also perforated. The caries were of particularly soft nature, having the consistence of cheese, although no tuberculous infiltration could be discerned by the naked eye. The operation had, thus far, the desired effect—it procured the most perfect comfort to the patient, with immunity from pain, and he enjoyed the best rest, and a tolerably good appetite almost to the last. The wound never closed, and discharged continuously a sanious pus; the prostration of the system by this constant drainage, increasing in proportion; troublesome bed-sores made their appearance, and diptheritic membranes through the intestinal tract preceded his death two months. He expired four months after the operation.

At the post-mortem merely the condition of the joint was examined; the acetabulum was found softened throughout, and perforated by an opening sufficiently large to allow the passage of the thumb; the shaft of the thigh-bone was carious, and softened to the extent of two inches, and the soft parts were in an appropriate condition,

Case 9.—Complete prolapsus uteri—Radical operation according to the method of Knechler in Fulda, and Savage of London—Use of silver wire for suture—Perfect result.—Bridget Cassedy, 38 years of age, married, mother of 5 children, admitted under service of Drs. Louis Bauer, and J. G. Johnson, to the institution, on the 18th of August. Until the beginning of her trouble, she had enjoyed good health; when she gave birth to her fourth child, the labor was tedious and her attendant had to use forceps. The posterior commissure was thereby lacerated; descensus uteri ensued. Her fifth child was born without difficulty.

When she presented herself at the hospital, the prolapsus had been in existence for eight consecutive years. It bore the following appearance: the entire vagina protruded; the constant exposure to air, and the friction by rough clothes, had inflamed, intumesced, and discolored the mucous membrane. The dilated os uteri occupied the most dependent point of the vagina, and its labia had lost their coutours. The mucous membrane of the womb discharged freely viscid matter; that of the vagina was rather dry. Behind the protruded parts, the introitus vaginæ was very wide, and extended beyond its natural limits, towards the anus, where a cicatrix of great laxity could be noticed. The perineum was altogether flabby, and without resistance. The operation being decided on, she received preparatory an aperient sufficient to clear her bowels.

On the 19th of August, clysmata were applied at 8 and 11 o'clock, A. M. respectively; and immediately after the latter, an opiate of gr. ij, when the operation, performed by Dr. Louis Bauer, proceeded as follows: an incision through the mucous membrane of the posterior wall of the vagina and integument of the perineum, circumscribed the shape of a heart, the point of which almost reached the anal orifice; in side carefully pared off. *Five deep sutures* through the whole thickness of vagina and perineum held on either side by shots alone. Six intermediate superficial sutures; both these and former were made with silver wires. The surface was thus converted into a linear wound. Having, in fine, divided the sphincter ani externus, as commended by Isaac B. Brown of London, Dr. Bauer terminated the operation by inserting Dr. Sims' self-retaining catheter, with a view of protecting the wound against the contact with urine. Patient received for a fortnight but liquid food and opiates sufficient to keep the bowels at rest. On the 7th day after operation removed the deep sutures, when superficial sloughing was found around the shots, obviously from their pressure upon the skin; the canals of sutures were however intact. 9th day, removal of the superficial sutures; wound proved to be closed by first intention. The vagina had been reduced to half its calibre and the perineum firm and resistant. The patient had but little inconvenience from the retention of stools, and occasional pains were easily allayed by morphia. On the 14th day, injection of diluted oxgall (Baker Brown) and castor oil. Next day patient was permitted to enjoy the open air in the garden, and her usual pipe, the perineum being, of course, supported by pad. Discharged cured on the 21st day after the operation. The womb up to that day was perfectly retained and sphincter had also resumed its function.



It will be seen that the operation Dr. Bauer adopted in this case was of a mixed character. The form of incision is claimed by both Savage and Kuechler* (episiorrhaphy); the double suture originated with I. Baker Brown, as well as the division of the sphincter muscle; and the material is the silver wire of Dr. Sims, which did good service in this case. Whether the recovery will be permanent is yet to be decided. For extent and appearance of the prolapse, the adjoined diagram taken from the plaster mould of the hospital museum, is referred to.

---

* Deutsche Klinik, No. 3, 1858.

PART SECOND.

CRITICAL ANALYSIS.

Art. VIII.—*Critical Examination of all the recent Works relating to Infantile Pathology and Therapeutics; prepared for the* New York Journal of Medicine. By A. Jacobi, M.D., Physician to the Children's Department of the (Canal street) German Dispensary of the city of New York.

(*Continued from p.* 436, *Vol. V.*)

8. *On Scarlatina: its Nature and Treatment.* By I. Baker Brown, F.R.S. Second edition. London, 1857, pp. 103.

The leading principle of the author's practice is (p. 99), that scarlet fever is a disease of debility, and, although the accompanying fever is inflammatory, yet it is of a low or asthenic type, and tends to destroy by exhaustion; and the practical deductions are, that every kind of treatment calculated to lower the nervous system, or the energy of the patient, is mischievous and bad. Wherefore, bleeding, active purging, alkalies, and the antiphlogistic regimen are improper; whilst measures directed to sustain the faltering powers, to allay febrile heat, and to restore deranged function, are proper and necessary. Dr. B.'s uniform treatment, as recommended to him by Dr. Hunter, consists in the application of the solid caustic (nit. arg.) to the tonsils and fauces, and of some stimulants (warm gin on flannel, hot linseed-meal poultice, embrocation of turpentine and camphor liniment) externally to the throat. The next proceeding is to give an aperient dose of calomel, to be followed by a dose of castor oil (or rhubarb and magnesia). The patient is at the same time ordered to be sponged all over with tepid vinegar and water, and directed to be kept in one bedroom, constantly in bed. As soon as the aperient has operated, he commences with the acetic acid mixture, containing half a drachm of the acid to each dose for a child under three years, increasing it to two drachms for one under fifteen, and still further, if the fever is severe. The strength of the acid is, acetic acid of the Pharmacopœia, one part to seven parts of water, and the form of giving it is as follows: ℞ *Acid. acetic. dil. two dr., syr. four dr., water two ounces; mix,* and take a fourth part every three hours. It is of vital importance to continue this through all the stages even until after desquamation is fairly over, and until a week or ten days have elapsed. Dr. B. asserts that he never has lost a patient, never has seen scarlatinal dropsy in 928 cases, except a few, whom he was called to see only when in articulo mortis. We do not desire to express a doubt of the veracity of the author, but it is a singular fact, that the same results have always been recorded after the recommendation of specific treatment. The remaining part of Dr. B.'s treatment contains nothing peculiar to him, but is the same that every physician of modern education and common sense will follow.

---

9. *An Essay on the Pathology and Therapeutics of Scarlet Fever.* By Casper Morris, M.D. Philadelphia, 1858, pp. 192.

This volume is an enlarged edition of the same author's "Lectures on Scarlet Fever" (Philadelphia, 1851, pp. 104). It is a highly valuable work, from the very fact, that it contains the author's practical experience during the course of thirty years, with only occasional glances at American and English literature. Its object is simply a practical one, and therefore we have to regret the omission of what we are accustomed to estimate most highly in a scientific monograph, viz.: pathologico-anatomical researches. Perhaps the author, if his investigations had led him to give the exact results of post-mortem examinations, would have somewhat modified his opinion, that diarrhœa, when it occurs, is to be ascribed to the irritation of the putrid colluvies swallowed from the ulcers of the throat, rather than to any direct influence of the cause of the disease on the mucous membrane of the alimentary canal (p. 105. 172). For it is as well understood, that ulceration of the glands of Peyer is a frequent lesion in fatal cases, as it is a pathological fact, that morbid affections are very prone to develop themselves on different and even remote parts of the same tissue.

In every other respect this book is written in a perfectly scientific manner; there is no uniform description of all the cases of scarlet fever; and the author gives no specific remedies. Although giving general principles of treatment, he advocates their proper application to each individual case, and considers nothing to be more dangerous, than to adopt empirical modes of treatment and specific remedies; for to their influence but few diseases are amenable.

Basing his general views upon such correct principles, his opinions are by far the most scientific of any we have had occasion to review on the same subject. His treatment of scarlet fever in its several forms, either "simple," "anginose," or "malignant," generally agrees with what rational therapeutics require at the present time, and what is laid down in every good modern manual on diseases of infants. There are only some particular features in the general mode of treatment of our author, which seem deserving of a special notice. The first is the administration of capsicum, in cases in which the eruption appears imperfectly developed from the first, or in which, after having been well marked, it recedes, or where the force of the attack falls upon the throat, from the very beginning, causing great tumefaction and difficulty of deglutition. "Whether convulsions, or restlessness, or stupor, complicate the case, or mere languor and exhaustion, all are but varying phases of one condition, and that, a condition which is to be removed by appropriate stimulation; and it is in these cases that the capsicum is productive of the happiest results." "Weak animal broths, freely charged with capsicum, may be given with great safety, even to the youngest infants in this condition. . . . . Should there be much local disease of the throat, it will receive great benefit from the passage of the capsicum over it. I have often administered the simple infusion when the stomach rejected the broths, or when I desired to maintain a more constant local impression. The common formula of a teaspoonful of powdered capsicum, the same quantity of common table-salt, a large spoonful of vinegar, and a half pint of boiling water, is an exceedingly good one. Of this, a teaspoonful may be given every hour or two to a child of five years and upwards, followed by a small portion of broth, or even wine-whey" (pp. 136, 137). "We are indebted to the West India practitioners for the introduction of this remedy to our notice in this disease. It is not only to its local impression on the throat that its beneficial influence is to be ascribed. It excites the depressed forces of the digestive organs, gives greater power to the functions of assimilation, and thus supports life by a secondary influence, even if it be not a direct nervous stimulant" (p. 145).

We fully agree with the author's opinion of the danger of cold applied externally to the head, in cases of great depression of the nervous functions. Cold is too sedative to be beneficial in such cases, although it may appear to be indicated by the quickness of the pulse. We do not, however, approve his treatment of albuminuria consequent on scarlatina. He is certainly right in asserting, that "the perseverance in nitre and diuretic remedies in these cases without first removing the local inflammation by local blood-letting, will aggravate the sufferings of the patient without producing any increase of the secretion" (p. 168); but we object entirely to the use of salts, like tartrate of potash and soda, and finally digitalis, in order to stimulate the healthy action of the kidneys. We regret not to find a single remark on some remedies, on the beneficial influence of which we have been taught, by many successful cases, to depend. We particularly allude to coloquintida, and to tannic acid, so ably advocated by Prof. Frerichs, in the treatment of Bright's disease.

Serous effusions, in general, take a well merited predominant place among the complications of the disease. Our author considers cerebral effusion to be the most formidable of the sequelæ of scarlatina (p. 93), although he reports (p. 94), that "only one such case proved fatal in his experience." We have not been so successful, but must nevertheless assert that in our experience in the treatment of scarlet fever, no consecutive œdema has proved so unexceptionally fatal as pulmonary œdema, when it ran an *acute* course. We know of none that recovered.

The preventive influence of belladonna, according to our author, is not yet decided upon; the experiments which have been made, give no sufficient proof for affirmation, or for denial. "The only field for experiment is some large institution for orphan or destitute children, where it can be tried while all other means of prevention are avoided. Larger numbers than can be found in private families, and more careful observations, are necessary to settle this point."

Finally, if it was practically important to study the early history of scarlet fever, we should not stop with the poetical description taken from Seneca, which seems to prove, that scarlet fever was known as a dire plague in the first century of the Christian Era. There are, undoubtedly, allusions to scarlet fever to be found in the writings of Cælius Aurelianus, a little earlier than Seneca, and very probably also in Hippocrates' works. Moreover, according to a contemporaneous English writer, it is to be considered a fact, that the plague so beautifully described by Thucydides, which devastated Athens at the time of the Peloponnesian war, was nothing but malignant anginose scarlatina.*

10. *Leçons cliniques sur les maladies chroniques de l'appareil locomoteur, professées à l'hôpital des enfants malades pendant les années* 1855, 1856, 1857. Par M. le Docteur H. Bouvier. Paris, 1858, pp. 531.

Clinical Lectures on the Chronic Diseases of the Locomotive Apparatus, delivered at the Hospital of Sick Children, during the years 1855, 1856, 1857. By Dr. H. Bouvier, M.D. Paris, 1858, pp. 531.

11. *Leçons cliniques sur les maladies de l'appareil locomoteur, professées, etc.* Par M. le Docteur H. Bouvier. Déviations de la colonne vertébrale. Atlas de 20 planches. Paris, 1858.

Clinical Lectures on the Diseases of the Locomotive Apparatus, delivered, etc. By Dr. H. Bouvier, M.D. Deviations of the vertebral column. Atlas of 20 plates. Paris, 1858.

In merely pronouncing the name of the celebrated French specialist, we are sure to at once direct the attention of the profession to these valuable works containing the results of Professor Bouvier's undoubtedly long and rich experience. The subjects treated of are so various and important, that we cannot attempt to give the shortest review of their contents. Old and new facts, the results of former and of the author's own experience, described in a style as plain as it is elegant, render this work the best exposition on the principal deformities of the osseous and muscular systems. The atlas is as beautifully and carefully executed as the book is well written and of a scientific stamp.

12. *The Successful Treatment of Scarlet Fever: also, Observations on the Pathology and Treatment of Crowing Inspiration in Infants.* By P. Hood, surgeon. London, 1857, pp. 200.

Although the author expresses his opinion, that there is no specific remedy against scarlet fever, he recommends a specific treatment. He makes no difference in the treatment of the disease according to the variety it presents, but makes it a rule to subject all patients who may be affected with even the mildest variety of scarlet fever, to a routine treatment. The treatment he adopts consists of emetics, purgatives, quinine, opium, and stimulant diets, especially wine. What he claims as new, is the precision of the rules for the employment of emetics and purgatives, and the persistent use of quinine as the chief remedy. His emetic is composed of 10 grains of each of the powdered root of ipecac. and the sulphate of zinc, of two drachms of syrup, and of one ounce water. It is destined to empty the stomach, "the presence of bile in which is one of the chief causes of the intense oppression of the brain," to free the gall bladder "of any acrid or redundant bile that may be in it, to remove convulsions and coma, and to induce a more copious secretion of the kidneys." As a purgative, the author administers calomel and scammony, as in such cases the liver is usually in a depraved condition, and the gall bladder surcharged with bile. It has to be repeated every day, and to be taken to such an extent, as to produce a loose state of the bowels, which is all that is required. The dose of quinine, which he commences administering after the first dose of the purgative, is one and a half grains. He considers it to be a specific not only in scarlet fever, but in the various affections comprised under the name of cynanche; further, in all diseases of the blood which have originated from the direct absorption of some animal poison, erysipelas, diphtheria etc. Opium never must be given before the tongue has ceased to be furred. Nitrate of silver is applied to the throat only where the tonsils are ulcerated; where they are only enlarged it produces irritation without benefiting the patient.

---

* Charles Collier: "The History of the Plague of Athens, translated from Thucydides, with remarks illustrative of its Pathology." London, 1857. We must confess, however, that Dr. Jonathan Osborne (Dublin Quart. Jour., May, 1855) appears to be more justified in assuming the "Plague" to have been scurvy.

From our opinion given above on any specific treatment, our estimation of the scientific value of this book is understood beforehand. Specific treatment can never be justified, as long as diseases and individuals differ. We take the liberty to add, that the remaining chapters on the pathology of scarlatina do not contain anything of importance.

Our author's opinions as to the cause of crowing inspiration in children (laryngismus stridulus), are the following: It has its origin either from enlargement of the liver taking place, or from derangement of the function of that organ, from the action of the diaphragm being impeded in such a manner as to interrupt respiration and circulation, and from pressure on the lungs, occasioned by the unnatural size and weight of the liver. In no case of laryngismus stridulus our author asserts to have failed to discover some enlargement of the liver, and therefore on the restoration of the perfect performance of its functions depends the successful treatment of this disease. Slight attacks of a transient nature are met with, which originate either from some irritation in the nervous system during dentition, or from a similar irritation occasioned by a distended stomach. External influences, such as fright, or exposure to a strong wind, will also sometimes be found instrumental in producing attacks of crowing inspiration.

Thus the author refutes himself by attributing slight attacks to another cause besides his "only one." Neither can we omit to state, that it appears to us a somewhat queer manner of drawing conclusions to take as granted that, if the liver is indeed always found enlarged in children suffering from laryngismus stridulus, this enlarged condition cannot but be the *only* cause of the disease. It has not come into the mind of our author, that what he takes to be the only cause, might possibly be consequence. Nor does he prove any better his opinion, that the enlargement of the liver arises from the mal-assimilation of the food, nor do we see any "physiological necessity why the blood thus formed, being of an unhealthy character, facilitates a preternatural growth in this organ, in the same manner that it occasions enlargement in the glands of the throat." Such assertions are so little proved by physiological facts, that in making them he cannot but weaken his own expositions and conclusions.

He agrees with Ley in this point, that the development of laryngismus stridulus depends mainly on the child being of a strumous constitution, and that there exists more or less enlargement of the glands of the throat and neck. Now we do not see the possibility of Mr. Hood's arguing with Ley, who, after having always been able to detect enlargement of the glands about the throat, and sometimes to find the recurrent nerve absolutely flattened, takes *the* cause of laryngismus stridulus to be the pressure of enlarged glands, or of aneurisms, or other tumors, on the recurrent or inferior laryngeal branch of the par vagum. So much is certain, and could be understood by comparison of known facts, that it is an anachronism in our time, to attribute the symptom of spasmodic inspiration to always one and the same cause. A countryman of Mr. Hood, James Reed (on infantile laryngismus: with observations on artificial feeding, as a frequent cause of this complaint, and of other convulsive diseases of infants), appreciated this better, ten years ago. According to him there are a number of causes giving rise to this symptom, amongst which he treats of cerebral congestions, hydrocephalus, enlargement of the cervical and bronchial glands, enlargement and diseases of the thymus gland, intestinal irritation, atmospheric influences, and vicious artificial feeding.

---

13. *Etude sur le développement et la structure des dents humaines.* Par Emile Magitot, docteur en médecine. Accompagnée de deux planches gravées. Paris, 1858, pp. 112.

Essay on the Development and Structure of Human Teeth. By Emile Magitot, M.D. With two engraved plates. Paris, 1858, pp. 112.

Dr. Magitot is of the very rare class of Frenchmen who confess that anything may be done or understood better elsewhere than in France. While he found, in England and Germany, a large number of treatises on the development and structure of teeth, he regrets to say, that he has found but a small number of articles on the subject in France, and these too under the influences of old and antiquated doctrines and with only a very incomplete knowledge of the results obtained in foreign countries. For this reason he quotes largely, Owen, Nasmyth, J. Müller, Purkinje, Schwann, Kölliker, etc. He considers the development of the dental substance during the embryonic period ;

in what he calls the period of actual development, where the elements of dental structure are formed and dispose themselves; and finally, in the adult period, where the tooth is entirely constituted. The first part treats of the development and structure of the dental follicle in all its parts, before the production of the hard dental substance has commenced; the second part comprehends the development of the proper dental substance in the follicle; and the third describes the elements of the definitive structure of the teeth. As to the original condition of dental structure, he mostly follows the opinions of Raschkow (*Meletemata circa dentium mammalium evolutionem.* Vratislariæ 1835), and Huxley (*On the Development of the Teeth and on the Nature and Importance of Nasmyth's Persistent Capsule,* in Quart. Jour. of Micr. Sc. April, 1853), only denying the existence of the membrana præformativa.

---

14. *Ueber die Entwickelung der Knochensubstanz nebst Bemerkungen über den Bau rachitischer Knochen.* Von PROF. HEINRICH MÜLLER, in Würzburg. Leipzig, 1858, pp. 89.

On the Development of Osseous Substance, with Notes on the Structure of rachitical Bones. By PROF. HENRY MÜLLER, of Wurtzburg. Leipsic, 1858, pp. 89, and 11 drawings.

Among the eminent German microscopists Prof. Müller has made himself very favorably known in a comparatively short time. The main points of this exceedingly able essay, as far as their relation to rachitis is concerned, are the following:

1. The first genuine osseous substance, that is formed in the interior of cartilages, takes its origin from the cartilaginous canals, in which osteoid masses are developed containing stellated cells. These become bones by deposition of earthy matter, the cartilaginous substance gradually disappearing. Such is the fact as well in the irregular (vertebral, tarsal) bones, as in the osseous nuclei of the epiphyses.

2. The first genuine osseous substance that is formed in tubular bones, takes its origin from the perichondrium, the inclosed cartilage gradually decaying, while medullary substance is formed. This is done, in man, after preceding deposition of earthy matter; in birds, frogs, etc., usually without it, genuine ossification within the periosteal osseous tubes commencing after the formation of medullar interstitia.

3. Where intracartilaginous ossification commences in rachitical bones, the deposition of earthy matter is deficient not only in the cartilage, but also in the newly formed osseous substance.

4. The shape of the medullar interstitia is abnormal in rachitis, the destruction of the original cartilaginous substance being incomplete.

5. Besides, a slow transformation of the cartilage takes place frequently instead of its normal and rapid decay.

6. The process of formation of the new osseous substance is frequently no less slow and incomplete.

7. In the abnormally persistent residues of the cartilage thick layers are formed round the cells.

8. In the interior of rachitical bones osteogeneous substance (osseous substance without earthy matter), is extensively formed, sometimes so much so as to render the bones flexible.

9. The rachitical alteration is most manifest in those parts of the tubular bones, where the first points of ossification originated.

10. Where the rachitical abnormities of ossification are very considerable, mere cavities are formed in the cartilage with soft and not osteoid contents.

15.* *Ueber Craniosclerosis totalis Rachitica und verdickte Schædel überhaupt nebst neuen Beobachtungen jener Krankheit. Ein monographisches Programm zu dem dreihundertjährigen Jubelfest der Universität Jena.* Von Prof. Dr. E. Huschke. Nebst Zwei Steintafeln. Jena, 1858, pp. 54, in 4.

On total Rachitic Craniosclerosis and Thickened Skulls in general, with new Observations of that Disease. Being a monographic programme for the tricentennial Jubilee of the University of Jena. By Prof. E. Huschke. With two lithographs.

Prof. Huschke, the great measurer and weigher of crania and brains, died, while this work was being printed; and never was a man more fortunate to leave after himself a work, that would of itself procure to its author immortality in the annals of pathological anatomy. Every sentence of this book being valuable, we regret not being able to give more than a meagre report of its manifold contents. But whatever we may select is worthy of the highest interest. The new case of total osteosclerosis described by our author is that of a girl of seventeen years of age, whose skull (the normal weight being 600 grammes), weighed as much as 4,117 grammes. The microscope showed, that the medullar (Havers') canaliculi were large and very numerous on the surface, narrow and very few in the interior of the sclerotic bones, and that the osseous canaliculi were more spheric and irregular in site and shape. The chemical composition was also abnormal, the constituents being phosphate of lime, 65.59; carbonate of lime, 11·12; sulphate of magnesia 1.14; cartilage, very little fat, etc. 22·15. No fluorate of lime was found. After all, the bones taken as a whole proved exceedingly solid, but fragile when tried in small pieces, very white in their interior, but yellowish on their surface; the latter color being the relic of extravasated blood or other pigmentous matter. Another skull, in the possession of the author, and apparently only in the beginning of sclerotic development, weighed, inferior maxilla excluded, 1,075 grammes; and a third, in the museum of the University of Jena, of the same description, is that of a young baboon, in which all the bones covering the hemispheres had undergone the sclerotic anomaly.

---

* This great work, published at Jena in 1854, bears the title: "Cranium, cerebrum and mind, of men and animals, described according to age, sex and race, by new methods and investigations." It contains nearly 200 pages, in fol., and is confessedly the results of more than ten years' hard labor.

The superior half of the skeleton, in the physiological state, exceeds the inferior half by a greater amount of calcaria. But this prevalence is not only absolute, but also relative, the single bones containing a larger average proportion of earths in general, and lime in particular. There is also a physiological craniosclerosis in families as well as nations; the thickest and hardest skulls being found in African negroes, whose crania, although they be not absolutely heavier than Caucasian ones, undoubtedly have a greater weight in relation to the size of the cranial cavity. Further, the crania of the flesh-eating negroes of Guinea are much harder and heavier than those of Persians and Hindoos. Moreover, it is altogether noteworthy, that the human organism in Africa is throughout prominent for the exceedingly strong development of the substances and organs taking the lowest place in human chemistry and physiology, viz.: bone, fat, and sexual organs, etc. Of undoubted morbid total cranioselerosis there are only ten cases; those of Malpighi, 1697; Cuvier, 1822; Ribalt, 1828; G. Forster and Bojanus, 1826; Ilg, 1822; Kilian, 1822; Otto, 1822; Vrolik, 1848; Albers, 1851; Huschke, 1858. The disease does not affect the auditory bones, the condyles of maxillar and occipital bones and the styloid process of the temporal bone. There are some symptoms of the disease in the posterior part of the cranium and basis cranii, but most affected are the bones of the face and the frontal, parietal and cribroid bones. Thus the disease takes its origin in the anterior portion of the skull, particularly in the superior maxilla and proceeds upwards and backwards, terminating in the basis cranii, in the neighborhood of infundibulum and appendices. Two observers have been so fortunate as to meet with the preceding disease in the living. The average amount of earthy matter is very considerable in all of them. While the normal proportion of earthy matter to organic substance in cranial bones has been found by Professor Frerichs to be = 2.1 (or 1.5) : 1—it is in the sclerotic bones from 3.5 to 4.4 : 1. Generally the carbonate of lime is reported to have been found increased, which proved to be the like in spongy bones. All the cases were those of juvenile individuals, or at least the disease had commenced in childhood.

The extension of the disease over the greater part of the cranium, contrary to the nature of local exostosis, proves the abnormal process to be the result of vicious general development. Professor Huschke, in opposition to the rest of the authors, pronounces the nature of the disease rachitic. The first origin must be traced back to early infancy, perhaps to fœtal life. Very probably the bones in early infancy were soft, succulent, and full of blood-vessels, and the cranium and cerebrum like the rest. After the period of rachitic, spongy thickening, and consequent mollification, osteoporosis was followed by the stage of rachitic éburneation, which continued to go on by the support of chronic inflammation. Now, in the first period of rachitis the bone is soft and spongy; its layers, while not less in number, secede from each other. The osseous substance is darker and more copious, the medullar cells larger, etc.; but in the period of sclerotic eburneation the peculiar osseous cells become denser, more numerous, the canaliculi thinner, medullar canals and diploë are gradually obliterating. The vegetation of the inner lamina of the bones is said to stop, in the physiological state, after the tenth year of life; and the dura mater does not form new layers before, in advanced years, the regressive period of cerebral development takes its commencement. After the fiftieth or sixtieth year of life resorption commences to lose power, the cerebrum become smaller, the veins narrower, arteries wider. If this development commences in earlier life, the above-named disease is originating, which, when the hyperostosis of the cranium is external—that is to say, when but the external surface is affected, does not affect the cerebral functions, but gives rise to serious trouble of the mental faculties when internal, and produces spasmodic affections, neuralgies, and paralysis.

The conditions necessary to the development of cranio-hyperostosis are first, abundance of lime; secondly, congestion, and sometimes chronic inflammation. It is a characteristic fact that the bones the development of which is the quickest after birth, show the greatest disposition to hyperostosis, as the maxillar and cranial bones. Abundance of lime may be produced by such food as meat. One of the patients is reported to have been a very hearty eater. Or, as has been the case in Huschke's individual, there is little excretion of lime by the urine. Or there is a metastasis of lime in such a way, that lime is resorbed in certain other places, and introduced into the substance of the cranium. Probably a number of causes coöperate to the same effect. But, at all events, it must be borne in mind, that the pathological process, great though the anomaly may be, is in a majority of cases to be explained by, and to be considered as, an extravagance in normal physiological development. The expositions of this fact, as published by Huschke, supported by his genius, extraordinary learning, and knowledge of literature; and further, the remarks on ossification of the sutures made on the last pages of this excellent work, we have the satisfaction to state, fully corroborate the views held by us long ago, and laid before the profession in a short essay on the premature closure of the fontanels and sutures, and their pathological importance (N. Y. JOUR. OF MED., Jan. 1858); a subject on which we hope to soon submit some new and interesting facts and observations to the critical examination of our readers.

---

16. *Die essentielle Lähmung der Kinder.* Von PROF. DR. W. VOGT. Bern, 1858, pp. 86

On essential Infantile Paralysis. By PROF. W. VOGT, M.D. Berne, 1858, pp. 86.

Since the essays of Badham, Dance and Heine, "essential paralysis" of children has not been made the subject of a monograph. Prof. Vogt treats this troublesome disease under three heads, according to the central or peripheric seat of the paralysis, taking as granted, that the nervous system, either in the brain or spine or in the peripheric course of the nerves, must be the cause of it. Differential diagnosis between cerebral and spinal, and again spinal and peripheric paralysis is sometimes very difficult indeed, and requires accurate observation of all the symptoms. The pathological anatomy is collected in the following results of post-mortem examinations, mostly made where the patients died in the acute eclamptic and cerebral attack of paralysis. There is hyperæmia of the brain and its membranes, which, whether it is cause or consequence of the eclamptic attack, Brachet says it is not yet decided. So much is certain, that eclampsia is more frequently the consequence of a primary congestion, even where the patient suffered from anæmia before ; only in cases of consensual eclampsia, congestion may be considered as the result of the attack. If the congestion is diffuse, eclampsia is general ; where it is partial, the attack, too, is only partial. Its next effect is either irritation or pressure on the roots of the nerves, which lasts as long as the congestion ; sometimes paralysis may remain, although there is no more direct pressure, only by the gradual alteration of the nerve ; of this kind are those cases particularly, where general paralysis gradually disappears, leaving only a single limb paralyzed. In cases of congestion, exudation is a frequent result, but is not necessary, according to Frederick, for paralytical effects, which are observed without it. In many cases of eclampsia no congestion or exudation is found, no organic change seems to have taken place ; this may be explained by the fact, that uncoagulated blood is liable to flow back into the body after death, and that small exudations in the white substance, although sufficient to produce death, are difficult to find. In some cases, meningeal products, and hydrocephalus is met with. If eclampsia passes without producing death, and the cases come to post-mortem examination at a late period, the consequences of inflammatory lesions are sometimes discovered, as condensations, cicatrices, and cysts, with or without destroyed cerebral particles.

After such results of post-mortem examinations, Rilliet and Barthez are certainly wrong when considering the essential paralysis beginning with cerebral symptoms, as merely "a functional trouble of the brain;" neither is Bouchut right, who considers the influences producing infantile paralysis, as merely peripheric.

Heine and West take the vast majority of cases to be of spinal origin. In the spine the same pathological alterations, as described in the cerebrum, are found, or not found. Extravasations are not so frequent as in the brain, but some cases are described by Ollivier and Hutin ; they produce either convulsions or, by pressure, paralysis. The usual effect of mere hyperæmia of the spine and its membranes are tonic spasms and paralysis, sometimes convulsions.

Cases of peripheric infantile paralysis gave very scanty results, a fact which is easily explained by the exceeding difficulty of finding alterations in the peripheric course of the nerves, and by the length of time that elapsed between the first paralytic attack and death. Rilliet and Barthez made two post-mortem examinations, in which nothing was found. Fliess found in a case of paralysis of the arm congestion of the spinal membranes about the height of the bronchial plexus.

After all, Prof. Vogt draws the following conclusions on the nature of infantile paralysis: 1. Infantile paralysis, which has been called essential, is a nervous paralysis. 2. It is the residue of a disease going along with material alterations in either the nervous centres or nerves. 3. The material alterations cannot be anything else than congestion, or inflammation with its consequences. 4. They may be removed, sooner or later, by natural processes; thus either the paralysis is also removed, or it continues in such cases where the nerves have lost already their irritability.

Of particular interest is the opinion of Prof. Vogt on primitive contractions, which have been declared a disease *sui generis* by Tonnelé, Constant, Guersant, Baudelocque, Weisse, Küttner (who devised the frightful name "arthrogryposis"), and Rilliet and Barthez. Helft and Rust believed in their identity with infantile paralysis, because of the identity of the alterations of the nervous centres. It is their and Babaud's opinion (*De la contracture des extrémités chez les enfants;* Union Méd. 1855, Nos. 97 and 98), which Prof. Vogt adopts (as also Hirsch, professor at Konigsberg, in his "Clinical Fragments," 1857).

We omit to say anything on the symptoms of primitive contractions, which perhaps each of our readers has had the opportunity to observe, and for the same reason we give no differential diagnosis of primitive and secondary contractions, but simply state, that primitive contractions (of the flexor muscles), are always combined with paralysis of the extensors, so much so, that whenever the contraction ceases, the hand (or foot) cannot be extended. Primitive contraction, when of a cerebral nature, is always painless. If it is of spinal origin, there is pain in the neck and between the shoulders; the dorsal muscles are strained, and the contraction can be reduced only with pain. If it is of a rheumatic nature there is great pain from motion and pressure; the limb is inflexible by force, the carpal joint is red and swollen; a swelling which must be discerned from the atonic œdema following upon anæmia and cachexia, and from thrombosis of the veins.

We abstain from further extracts, because the whole little book is so short and concise in its expositions, and so rich in its facts as not to allow of abbreviation without detracting from its value. One chapter we shall dwell upon at some length, as soon as we come to the review of Dr. Friedberg's work on the pathology and therapeutics of muscular paralysis, viz.: "the progressive atrophy of the muscles." The length of these reviews, however, does not permit us to occupy the attention of our readers any longer; thus we omit giving extracts from Prof. Vogt's therapeutical expositions. In general, we can say, that we seldom have perused any monograph of the length of this one, that has a greater abundance of facts and truths in a short space, that is at the same time written in a style so clear and modest, and stands firmer on the basis of modern scientific medicine. The old Swiss professor appears to have preserved the full vigor of youth and scientific enthusiasm to his advanced age of more than "three score and ten."

17. *An Essay on Wasting Palsy (Cruveilhier's Atrophy).* By WILLIAM ROBERTS, M.D. London, 1858, pp. 210.

18. *Pathologie und Therapie der Muskellähmung.* Von DR. HERMANN FRIEDBERG, Docenten an der Universität zu Berlin. Mit 4 Tafeln Abbildungen. Weimar, 1858, pp. 350.

Pathology and Therapeutics of Muscular Paralysis. By HERMANN FRIEDBERG, M.D., Lecturer at the University of Berlin. With 4 plates.

It is a remarkable fact, that a subject of great pathological importance should be treated by two distinguished men, in two different countries, with the like care, ability, and success, at the same time. Either of the works, the titles of which are given above, will not fail to enrich science and to confer honor on their authors, and singularly enough, in many instances by the same facts, examinations, and ideas. If there was a necessity to prove such an assertion, this coincidence, like many others known in the history of medical science, would be a proof of, as it were, a scientific atmosphere existing in the scientific world, and surrounding all the cultivated minds. Like wants appear to produce like exertions and like results.

Neither of the books referred to falls entirely under the head of our review; but we thought fit to give some facts from both, in order to show the relation of muscular paralysis to the essential paralysis of children, as set forth in the book of Professor Vogt; the more so because 13 cases of the 105 reported by Dr. Roberts occurred in children of 14 years and under, and 3 new cases, introduced by Dr. Friedberg, were in boys of 1½, 6, and 13 years of age.

Contrary to the anatomical cause of essential paralysis, we learn, from the examinations of our authors, that

1. The grey substance of the spinal cord may be extensively diseased without progressive atrophy of the muscles existing.

2. In some cases of this disease other parts of the spinal cord have been found diseased, the grey substance being normal.

3. In some cases of general muscular atrophy (40 out of 105 cases collected by Roberts belong to this class) and paralysis of the entire muscular system, the spinal cord and the roots of the spinal nerves have proved entirely normal.

4. Therefore, degeneration of the roots of the spinal nerves must not be taken to be the consequence of paralysis consequent upon muscular atrophy.

Neither of our authors thinks the name of the disease, as proposed by Aran, "atrophie musculaire progressive," a good one. Friedberg would propose the name of "paralysis from alienated nutrition of the muscles," but prefers simply "muscular paralysis;" Roberts thinking "idiopathic degeneration of the voluntary muscles" somewhat lengthy, although physiological, suggests simply "wasting palsy," or "Cruveilhier's atrophy," after the writer who has taken the most prominent part in elucidating its history.

The seat of the disease is proved neither to be in the vascular system, nor in the spinal cord, nor in the anterior roots, nor in the peripheral distribution of the nerves, nor in the sympathetic nerve. It must, therefore, have its seat in the muscles, in the combined opinions of Duchenne, Aran, Oppenheimer, Wachsmuth, Meryon, Roberts, and Friedberg, and consists "in a fatty and granular degeneration of the muscular fibre, similar (often, at least), in its anatomical bearings, to what is observed in fatty heart, or in muscles which have degenerated from section of their nerves. There would seem to be an error of nutrition in the muscular fibre, not dependent, as Dr. Meryon thought, on a general depression of the nutritive functions—these being almost always in their highest perfection—but brought about under the influence of a peculiar constitutional predisposition or diathesis."—(Roberts, p. 175.) The single causes are best set forth by Dr. Friedberg, who thinks muscular paralysis to be very generally the result of inflammation of the muscle or a similar process. He discerns the following six divisions, according to the principal causes of degeneration :

1. Propagated myopathic paralysis. The nutritive trouble is propagated to the muscle from a neighboring organ.

2. Traumatic m. p.

3. Rheumatic m. p.

4. Dyscrasic m. p., from cholera, dysentery, scurvy, syphilis, typhus, exanthems, puerperal state, rachitis and osteomalacia, lead disease, and hereditary influence.

5. Marastic m. p., in consequence of deficient circulation of the blood and suppressed muscular motion, from bandages surrounding a limb for a long time, immobility of the joints (induced by organic disorganizations, cutaneous cicatrices), pressure upon each other of the muscular particles approximated after luxations, old age, disease of blood-vessels and thrombosis, tumors, diminution of nervous influence.

6. Simple m. p., where there is a nutritive trouble without a manifest cause. Many cases of essential infantile paralysis have falsely been brought under this head.

Thus it appears, that the discrimination between essential paralysis of children and muscular paralysis is well shown. We omit, as not pertinent to our object, to enter any further into the discussions of our authors, only stating, at last, their similar views as to therapeutics.

Remedies applied to the vertebral column, etc., are out of question, because there is no disease of the nervous centres. Remedies acting on the system at large are successful in such cases only where the constitution is affected by syphilis, scrofula, etc. There are two unquestionable remedies, viz., methodical exercise, and cold mineral and douche baths, which, however, when the disease is still in active progress, are more likely to do injury than promote recovery. Besides thermal and sulphur baths, frictions, with stimulating liniments, and Faradization, may be relied on. A rational treatment ought to be commenced within as early a stage as possible, and the exciting causes, as overwork, must be strictly avoided. Where contractions are, according to Friedberg, the exciting cause, they must be treated by electricity, methodical exercise, and gradual stretching, when flexible; in cases of inflexible curvatures, machinery, knife, and brisement forcé have to commence the treatment. For particulars we refer our readers to Dr. Roberts' and Dr. Friedberg's books, either of which we again take the occasion to recommend to the profession.

---

19. *On Malformations, etc., of the Human Heart. With original Cases.* By THOMAS B. PEACOCK, M.D., etc. London, 1858, pp. 143, and 8 plates.

Several original observations on malformation of the heart, have induced the author to revise and extend a series of lectures, published some years ago in the *Medical Times and Gazette*. The subjects treated of in this essay embrace: 1. Misplacements of the heart; 2. Deficiency of the pericardium; 3. Malformation dependent on arrest of development at an early period of fœtal life (defects in the auricular and ventricular septa, contraction and obliteration of orifice of the pulmonary artery, supernumerary septa); 4. Malformations preventing the heart undergoing the changes which should ensue after birth (premature closure of the fœtal passages, patency of the foramen ovale and ductus arteriosus Botalli); 5. Malformations which do not interfere with the functions of the heart, but which may lay the foundation of disease in after life (irregularities of the valves, etc.); 6. Malformations consisting in the irregular development of the primary vessels (transposition of aorta and pulmonary artery, descending aorta given off from the pulmonary artery, etc.); 7. Mode of formation, symptoms and effects, diagnosis, and medical management of malformations of the heart. The whole is a valuable contribution to the literature on malformations, particularly so from the original observations communicated. Besides, the author proves himself to be well acquainted with the preceding literature on the subject, quoting largely from English, American, French, and German books and journals. The latter are more deficient than the others; we miss particularly the monograph by Dr. Hermann Friedberg on the same subject. (*Die angebornen Krankheiten des Herzens und der grossen Gefässe des Menschen, nebst Untersuchungen über den Blutumlauf des menschlichen Fœtus.* Von DR. HERMANN FRIEDBERG. Leipzig, 1844, pp. 170.)

---

20. *Morphologie der menschlichen Nabelschnur.* Von DR. LUDWIG ADOLPH NEUGEBAUER, in Warschau. Mit 2 Tafeln Abbildungen. Breslau, 1858, pp. 80.

Morphology of the Human Umbilical Funis. By DR. LEWIS ADOLPHUS NEUGEBAUER, of Warsaw. With 2 plates.

This pamphlet contains the literature and the author's extensive new investigations on the formation of the umbilical funis, and particularly on the relative position of its several constituent parts. The circumvolutions of the umbilical arteries and veins, take a prominent part in these expositions, leading to entirely new results. One of them is this, that neither the umbilical arteries are circumvolved round the vein, nor

Sometimes the arteries round the vein, and again the vein round the arteries, as was supposed to be the case in some instances by Baudelocque, Velpeau, and Weidmann; but that umbilical arteries and vein together, and without any change in their mutual situation, follow the spiral line characterizing the course of these vessels. Further, the pathological circumvolutions of the funis round the fœtus, and the real knots in the course of the funis are made the subject of interesting examinations. The new results, and the real scientific gain obtained by this little book are so important, that we despair of doing the author justice and giving the reader a full view in the few lines allotted to us. The book is not only prominent by the common sense and clear reasoning of the author, but we have seldom had occasion to admire greater learning, and more special knowledge of the literature on any given subject, of all times, nations and languages.

21. *On the Transmission, from Parent to Offspring, of some forms of Disease, and of Morbid Taints and Tendencies.* By James Whitehead, M.D. Second edition. London, 1857. pp. 432.

With the greatest satisfaction we merely announce the appearance of the second edition of Dr. Whitehead's book on hereditary transmission of diseases in general, and of syphilis in particular. The work being well known to the profession, we should abstain from making any additional remark, but for the new facts relative to the communicability of syphilis, set forth in this new edition. The author's experience during the six years between the appearance of the two editions has served to confirm the belief before expressed, "that not only is the matter of secondary sores capable of reproducing a disease of similar character by inoculation; but that lingering taints, the existence of which is scarcely, if at all, recognizable by external phenomena, are also communicable through sexual, if not other media, and thence liable to be continued to the offspring." Since the disease has been successfully implanted by inserting the blood of an infected person on the abraded skin of one previously in good health, the author concludes that, in order to reproduce the phenomena of secondary accidents by inoculation, it is no more necessary to use the concentrated poison as met with in form of cutaneous deposit. Thus the salivary and mucous secretions, or the cutaneous transpirations of a contaminated person cannot be considered as entirely innocuous.

As to the treatment, the mercurial plan is that which has thus far afforded the most satisfactory results in the author's practice, and is the only one upon which he could place any reliance; while the iodine preparations, without the aid of mercury, even when given to the fullest extent, have failed to produce more than amelioration of symptoms. Of syphilization he confesses to have no experience, but considers its sufficiency as a curative agent to be thus far doubtful.

22. *Exposition critique et pratique des nouvelles doctrines sur la syphilis, suivie d'une étude sur de nouveaux moyens préservatifs des maladies vénériennes.* Par P. Diday, de Lyon. Paris, 1858, pp. 560.

Critical and Practical Exposition of the new Doctrines on Syphilis, with an Essay on new Preservatives against Venereal Diseases. By P. Diday, M.D., of Lyons. Paris, 1858, pp 560.

Dr. Diday is well known for his "Essay on Syphilis of New-born Infants and Nurslings." (Paris, 1854, pp. 439.) Of this new work merely a part belongs to the department of these reviews—that is to say, the chapter on congenital syphilis (p. 353–393.) The author discusses anew the important questions: by whom the infant can become infected; and whom it can itself infect. The infant may be infected by the father, although he does not show actual symptoms of syphilis; it may be infected by the mother either in the moment of conception or during pregnancy; it may be infected by its nurse. Again, the fœtus after having contracted syphilis from the father, can infect the mother; and the infant suffering from hereditary syphilis can give the disease to any body that approaches it, because the lesions of hereditary syphilis, although showing the outside appearance and evolution of secondary syphilis, are distinguished from common syphilis by their being as contagious as primary accidents. The elucidation of these facts, which begin gradually to be taken as such by the whole profession, we principally owe to Dr. Diday.

---

23. *Hygiène oculaire de l'enfance, ou exposé des moyens connus qui peuvent prévenir ou rendre moins graves les maladies oculaires de l'enfance.* Par Achille Samson, Dr. etc. Paris, 1858, pp. 48.

Ocular Hygiene of Infancy; or, Exposition of the Means known to prevent or render less grave the Ocular Diseases of Infancy. By Achille Samson, M.D., of Lyons. Paris, 1858, pp. 48.

This pamphlet is well written and contains 14 chapters with general remarks and special expositions on congenital diseases of the eye; on purulent ophthalmia; on catarrhal and pustulous conjunctivitis; on blepharitis and keratitis; on pannus, strabismus, myopia, asthenopia, and amaurosis. From among the statements of the author we select the following: A quarter of all the cases of blindness met with in adults, are the effects of ocular diseases contracted in early life, particularly of purulent ophthalmia. Some cases are congenital, as *congenital cataract*, in which the sensibility of the retina is sometimes kept intact for life, sometimes diminished in a short time. Thus the question arises, when congenital cataract must be operated upon. Dr. Samson follows the examples of MacKenzie, Rognetta, Ansieux, and Sichel, who operate either in the first months of life or after dentition is fully finished. *Purulent ophthalmia* is a very common disease among young children;

being mostly found in new-born infants, and scarcely ever after the fourth or fifth year of life has been accomplished. This predisposition of early infancy must not be sought in special poisonous principles of the atmosphere, nor in a peculiar sudden inoculation during birth, but rather in the anatomical and physiological development of the infantile eye. In new-born infants the cornea is thicker, the aqueous humor less limpid, but soft and voluminous, eyelids thin and transparent, and receive more serous matter from the blood-vessels; Meibohm's glands have an exaggerated development, subconjunctival cellular tissue is abundant and loose, and its blood-vessels very little compressed. Of the local astringents recommended in purulent ophthalmia Dr. S. gives the preference to borax dissolved in 400 parts of water. *Catarrhal conjunctivitis* is only palpebral in the majority of cases, the bulbus seldom showing signs of inflammation, especially no phlegmonous chemosis. *Pustular conjunctivitis, blepharitis*, and *keratitis* have been called, before Trousseau and Desmarres, by the collective name of scrofulous ophthalmia; our author naturally prefers the exact anatomical and pathological nomenclature of the above-mentioned writers. The pustules commence their development in the small glands of the conjunctiva, like aphthæ on the mucous membrane of the mouth, particularly in the inner angle of the eye, as it contains a greater number of vessels. Blepharitis may consist of either inflammation of the roots of the cilia, or of Meibohm's glands, or it may be mucous, or granular. *Spots on the cornea* are usually found in or near the centre; marginal ulcers leave no spots from their being in the neighborhood of resorbing blood-vessels. *Luscitas* is but a variety of *strabismus*, and complete immobility, pronounced pathognomonic in luscitas by Beer and Mackenzie, need not be present. Surely there are different stages and degrees. Strabismus will degenerate into luscitas, by paralysis of the third or sixth pair, from cerebral affections, traumatic lesions of the ocular muscles or their nerves, adhesions, tumors in the orbits, and congenital absence of a m. rectus. In the *asthenopia* (want of the accommodating faculty of the eye) of onanists, the pupil is said to lose its normal situation, turning inwards and upwards. Amaurosis in infancy is reported to follow on dentition, worms in the intestinal canal, suppression of eczematous and impetiginous eruptions, acute exanthems, and—lice.

---

24. *A Practical Treatise on the Diseases of Children.* By J. FORSYTH MEIGS, M.D. Third edition. Philadelphia, 1858, pp. 724.

---

25. *Die Wurmkrankheiten des Menschen mit Versuchen an lebenden Thieren.* Von DR. BENEDICT MEYER. Zweite Auflage. Leipzig, 1858, pp. 137.

On the Worm Diseases of Man, with Experiments on living Animals. By BENEDICT MEYER, M.D. Second edition.

---

26. *Ueber die häufigeren Verkrümmungen am menschlichen Körper und ihre Behandlung.* Von DR. DUERR, in Stuttgart. Mit 12 Abbildungen. Stuttgart, 1857, pp. 55.

On the more frequent Curvatures of the Human Body, and on their Treatment. By DR. DUERR, of Stuttgart. With 12 drawings.

The author having treated 113 cases of curvatures of the human frame himself, and being well acquainted with the literature of the subject, undertakes to show, as concisely as possible, the best plan of curing the diseases in question, and especially to explain his views on a simpler treatment than that usually followed. At the same time he describes, and recommends for their simplicity, some new machines and bandages; being, however, well aware that the number of those already in existence and use is more than legion, but insisting on the fact, that the majority of them are more useful in hospital use than in private practice. Altogether, the little volume will prove useful, the author apparently being a well educated anatomist and a practical surgeon.

---

27. *Encephaloceles congenitæ casus rarior. Dissertatio inauguralis, auctore Theophilo Zdzienski, Polono.* Adnexa tabula. Dorpati Livonorum, 1857, pp. 32.

The majority of cases of encephalocele, or cerebral hernia, occur in the occipital bone, and very few of them are met with about the root of the nose. The case described by Dr. Zdzienski belongs to the latter class, but shows some peculiar features of high interest. The usual place where a cerebral hernia may be found is one side of the nose, while in the case described it is bi-lateral. Further, the mass protruding is so large that the nasal bones form part of the anterior wall of the cranial cavity. Another highly interesting fact is this, that the individual affected by this peculiar abnormity reached the age of between eleven and twelve years. The tumor protruded one and a half inches above the height of the nose, and showed the symptoms of a common vascular tumor, was removed by the "écraseur," and the meningitis consequent upon the operation caused the death of the patient.

---

28. *Leçons théoriques et cliniques sur la scrofule, considérée en elle-même et dans ses rapports avec la syphilis, la dartre et l'arthritis.* Par le DOCTEUR ER. BAZIN. Paris, 1858, pp. 262.

Theoretical and Clinical Lectures on Scrofula, considered in itself and its relations to Syphilis, Tetter, and Gout. By ER. BAZIN, M.D. Paris, 1858, pp. 262.

The subject of this book has been treated of so many times and so variously, that the reader will necessarily expect some new facts or views in opening another volume on the same subject. We must confess that he will feel sadly disappointed. The author's discoveries are no discoveries, his new facts are very old, his classification is either prolix or confused, and his pathological views are very antique indeed. The old doctrine of diatheses is confessedly only a scape-goat of our ignorance, so much so, that every educated physician of the present time feels somewhat confused or unsatisfied in merely pronouncing the word; the author, however, is so far from feeling the necessity of limiting the use of the term of "*diathesis*," that he invents some other diatheses besides those the unsatisfactory state of modern pathology requires. According to him, a diathesis is "an acute or chronic, feverish or unfeverish, continued or intermittent, contagious or not contagious disease, characterized by the formation of one, single, morbid product, which may have its seat indiscriminately in all the organic systems." Thus there are purulent, chondromatous, tuberculous, hemorrhagic, serous, saccharine, calculous, pseudo-membraneous, gangrenous, adipose, fibrous, cancerous diatheses (p. 10). Nothing can be more convenient than to hide one's self behind the screen of a Greek word with more sound in it than intelligibility and pathological signification. One of the discoveries of the author is that the lesions of the skin are no diseases, but symptoms of diseases; that, therefore, the investigation of cutaneous eruptions ought to be considered as a part of general semeiotics. Another discovery of the author's is, that cutaneous diseases are effected either by external or by internal causes, and that parasitical diseases belong to the first class; that parasitical diseases have been confounded with cutaneous affections from internal causes up to his, the doctor Bazin's time, but that, "God be praised for it," this family is now at last established on a solid basis. As his third important discovery the doctor asserts, that cutaneous eruptions from internal causes are "either congenital or pathological." Nævi and ichthyosis belong to the "congenital" affections, the "pathological" are composed of the exanthems and the whole number of diseases of the skin called impetigines by Frank. The usual name of these "impetigines" is tetter, according to the author; for which four principal diatheses can be found to exist, viz., scrofula, syphilis, herpetism, and arthritis. Now tetter, when the consequence of only one diathesis, is very easy to diagnosticate and to cure; but it is often the result of a number of diatheses combined, and then our author declares it to be truly a terrible affair. Thus our readers perceive, that the author not only turns his back upon even a trial of physiological investigation, but hastens to return to the very worst ontological period which medical science has long ago overcome. This book is a useless play-work of classifications and sub-classifications, without scientific foundation, without new facts. The only thing new, his return to ontology, his manner of writing and explaining, is very discouraging. We are as bold as to pronounce the opinion, that nobody ever will read this book from the first to the last page, except the author, without becoming either simply tired or thoroughly disgusted.

29. *Jahrbuch für Kinderheilkunde und physische Erziehung.* Wien, 1857–1858.

Annual of Infantile Pathology and Physical Education. Vienna, 1857 and 1858.

After the *Journal für Kinderkrankheiten* (*Journal for Infantile Diseases*), edited by Drs. Fr. Behrend and A. Hildebrand, and published at Erlangen, had been existing for thirteen years, Dr. Kraus, of Vienna, undertook to publish, also in twelve yearly numbers, the *Oesterreichische Zeitschrift für Kinderheilkunde (Austrian Journal for Infantile Pathology)*. When he was, by his private business, no longer able to attend to its publication, it ceased to appear after two years had elapsed, Sept., 1857. Drs. Fr. Mayr, L. M. Politzer, M. Schuller, have since stepped in to fill the void, with the *Annual of Infantile Pathology and Physical Education*, four large numbers of which have since appeared. While no other country has a single journal for the specialty in question, Germany can boast of two journals devoted to infantile pathology, both of which have alike able contributors, and a large number of friends and readers. This fact would of itself admit the conclusion that pædiatrical science is more progressive in Germany than anywhere else. Besides, there are a great many valuable articles on infantile matters dispersed in the other scientific journals, and, what is deserving of particular appreciation, there are nowhere more hospitals for sick children than in Germany. When adding, that the majority of German universities offer to the student not only lectures on diseases of children, but also clinical instruction, we do not exaggerate when we add, that Germany at the present time takes the lead not only in exact medicine (pathological anatomy, etc.), but is also prominent by its practical efforts. We regret to have to remark, that our country, while not behind in many departments of medical science, has in a most extraordinary manner neglected infantile pathology. Not only are the original contributions to this subject very meagre, but there is an apparent want of appreciation and appropriation of foreign discoveries and investigations, and the student not only lacks clinical instruction, but even lectures on diseases of children. We omit further remarks on this subject, to return to the work before us. Its contents are composed of original contributions, miscellanies from general medical literature, and critical reviews. The first are most valuable. As instances, we name Prof. Clar's essay on the pathology and therapeutics of some of the most important diseases of the infantile intestinum crassum; Dr. Vogel's contributions to the physical exploration of the lungs in young infants; Dr. Mayr's articles on the examination and semeiotics of sick children; Dr. Hermann Zeissl's essay on congenital syphilis of newborn infants and nurslings; Dr. Bokai's article on retropharyngeal abscesses in children, and Dr. Politzer's ideas on scientific dietetics and physical education. The care and industry given to each of the five numbers which have hitherto appeared, has been the very same from the beginning to the end. The editors cannot but win by their labors the thanks of the profession and a good reputation for themselves. We have frequently availed ourselves of the opportunity to lay notices and extracts from the annual before our readers.

---

30. *Die Physiologie der Thymusdrüse in Gesundheit und Krankheit, vom Standpunkte experimenteller Forschung und Klinischer Erfahrung, Ein Beitrag zur Lebensgeschichte der Kindheit.* Von ALEXANDER FRIEDLEBEN, Dr. Med., zu Frankfurt a. M. 1858. pp. 336.

The Physiology of the Thymus Gland in Health and Disease, viewed from Experimental Examinations and Clinical Experience. A Contribution to the History of Infantile Life. By ALEXANDER FRIEDLEBEN, M.D., of Frankfort on the Maine. 1858. pp 336.

In order to enable our readers to judge of the value of this book for themselves, we give in the following some aphorisms containing the principal results obtained by the author :

1. The thymus is a gland without any excretory duct ; it consists of an aggregate of closed follicles.

2. Its blood-vessels are of moderate size ; thus their amount of blood is also moderate.

3. The nerves contained in its substance belong to its blood-vessels.

4. It exhibits a secretion, consisting of a transparent, clear, intercellular liquid, and numerous round nuclei intermixed with some cells.

5. The nuclei are transferred, unaltered, into the venous circulation.

6. The follicles of the thymus are subject to an unremitting decomposition and reconstruction ; the so-called concentric corpuscles described in the microscopic anatomy of the thymus, are follicles undergoing their morphotic decomposition.

7. The thymus is growing in size, without interruption, from its first embryonic formation up to the years of puberty ; but its relative growth, after birth, is less than the average development of the rest of the body; the more so, the greater the age.

8. After the years of puberty have been reached, the thymus either remains stationary in its growth, or undergoes a gradual diminution of its volume ; this diminution of size is rapidly increasing in adult age.

9. In old age the thymus is rarely met with ; wherever it is found it consists of an adipose intercellular tissue, preserving the shape of the thymus.

10. Years advancing, the secretion of the thymus decreases.

11. The normal diminution of the thymus consists in a process of fatty degeneration, taking its origin from the wasting of its vaso-motory nerves. Thus obsolescence of its arteries and dilatation and varicosity of its veins are effected. Metamorphosis becomes slow, and the morphotic elements of its secretion are decomposed or undergo fatty degeneration ; only the action of the lymphatic vessels remain intact, and enables resorption of the tissue to go on.

12. The thymus may be wanting in the fœtus and in infants of normal development.

13. The chemical elements of the thymus are water, albumen, gluten, sugar, lactic acid, pigmentous matter, fat and salts, and perhaps hypoxanthin besides. Ammonia, leucin, acetic acid, and succinic acids do not take part in the formation of the thymus.

14. In early age, albumen, sugar, salts are prevalent ; in later years, glutin, lactic acid and fat.

15. The salts principally are phosphates of earths in young individuals, of alkaline nature in older ones.

16. The general nutrition of the individual determines the volume of the thymus and the amount and nature of its secretion ; the scarcer food and the more prevalent hydrates of carbon, in proportion to azotic substances, the less the secretion of the thymus or the more prevalent the percentage of fat and water.

17. Want of nourishment and diseases going along with troubles of digestion and assimilation produce a collapse of the tissue of the thymus. The secretion formed is rapidly resorbed and the chemical composition is soon altered.

18. The pathological disturbance having been removed, the thymus again takes its former functions, increases in size and continues its growth; only when the interruption lasted for a long time, the tissue may be collapsed and resorbed to such an extent as to produce perpetual partial obliteration.

19. The nerves of the thymus do not suffer from the atrophy of the organ brought about by general diseases; thus this atrophy is, in its histological and physiological nature, essentially different from the process of normal involution.

20. The thymus exhibits, while in its physiological condition, a slight turgescence during assimilation, depending on secretion being more copious; there is no turgescence in the thymus depending on the circulation of the blood being stopped.

21. The size of the thymus is subject to numerous individual changes in every age.

22. Metamorphosis of matter in the thymus is like that of the remaining organs.

23. The growth of the spleen is increasing, in advanced years, in the proportion of the diminution of the size of the thymus.

24. The thymus is more active during digestion and assimilation, the spleen in the intervals.

25. The thymus is found in all classes of the vertebrates and obeys the same laws in its growth. It will decrease quickest in the animals whose growth is the most rapid.

26. Its histological and chemical nature differs entirely from the fat-gland of the winter-sleepers.

27. Diseases of the respiratory organs do not affect the volume and secretion of the thymus except by injuring digestion and assimilation.

28. The thymus exhibits abundance of growth wherever general growth becomes extravagant. After this period of extravagance of growth has passed by, the thymus is somewhat inactive; thus its action is always in proportion to the general metamorphosis.

29. The thymus may be extirpated without injuring the well-being of the animal.

30. Animals deprived of their thymus take a larger quantity of aliments than before the extirpation; there is no tendency in such animals to devour heterogeneous substances.

31. The growth of the body is larger in animals, whose thymus is extirpated, than in normal ones; but it is less than ought to be expected from the immense amount of food swallowed.

32. Extirpation of the thymus has no particular effect on the volume of the liver. In normal animals, during the first two months of life, the growth of the liver is proportionately smaller than that of the body in general; afterwards for a short period, larger, and then again smaller. The like is observed in animals whose thymus has been extirpated.

33. Extirpation of the thymus has a manifest effect on the spleen; the growth of which is less in proportion to the body in general, after the operation has been performed. The growth of the spleen in animals operated upon is, in the first weeks of life, larger by 5 per cent. than in animals whose thymus is untouched. But as early as after the eighth week the growth of the spleen in animals operated upon is less, by 26 per cent, than in normal development.

34. Sanguification in animals whose thymus is extirpated, is accelerated; their blood contains more albumen and water; the number of the uncolored blood-cells is greater, of the colored ones less; secretion of albuminates increased, of carbonic acid diminished; excretion of water greater by means of perspiration, less by secretion of urine.

35. The growth and chemical constitution of bones is influenced by the extirpation of the thymus. This influence depends on the state of osseous development at the period of the performance of extirpation.

36. Such being the main results of a series of physiological researches, it may be taken as a fact, that the *thymus is an organ furthering, during the period of growth, nutrition and sanguification, and the formation and development of tissues.*

37. Diseases of the thymus gland are proportionately rare occurrences. Hyperæmia and apoplexy have been met with in new-born infants, who had died from the use of violent means during parturition, and have been found also in somewhat older infants. Also tuberculosis has been occasionally observed in the thymus. But occurrences of this kind are by no means so frequent as former authors have believed them to be.

38. The majority of cases considered hitherto to be diseases of the thymus, either did not occur in the thymus at all, or have wrongly been taken as such; the thymus being not at all diseased.

39. There are no characteristic symptoms belonging to diseases of the thymus. Only one case of suppuration of the thymus has been made public; no peculiar symptoms could be distinguished during life.

40 A great number of cases of alleged hypertrophy of the thymus have been reported; nevertheless, real hypertrophy is a very rare occurrence. The majority of cases of so-called hypertrophy are overrated, the physiological size and weight of the thymus not being sufficiently known.

41. Undoubtedly no one case is hitherto known of hypertrophy of the thymus producing pathological symptoms dependent on its excessive volume.

42. Neither in its normal, nor in its hypertrophied condition is the thymus able ever to become an obstacle to respiration and circulation, or to exert a pressure on the respiratory nerves, or to injure cerebral circulation and the innervation of the muscles of the glottis, or to produce a periodical turgescence in its substance by stoppage of the circulation. Thus the thymus is unable as well in its normal as in its hypertrophied condition to produce laryngismus stridulus. *There is no asthma thymicum.* Thus, the name of thymic asthma is but of a historical interest; it was founded on erroneous ideas on the nature of the disease, on erroneous interpretation of anatomical results, and on insufficient knowledge of the physiological nature of the thymus gland.

All the preceding theses on this subject have been proved by extensive anatomical and physiological researches and an ingenious sifting of the ancient and modern literature on the subject. We are not surprised when the author says that this work took him a decennium. It is not only one of the most important recent books in the whole bulk of medical literature, but as a contribution to infantile pathology, we rank it foremost among all the monographs that have appeared for a long time past. It belongs to the class of books which, although the author may never again touch a pen, makes him an authority at once and leaves his name to the history of medical science.

(*To be continued.*)

BIBLIOGRAPHICAL NOTICES.

Art. IX.—*The Diagnosis of Surgical Cancer.* By John Zachariah Laurence, F.R.C.S., etc. Second edition. London: John Churchill, 1858.

The design of this work is to point out the leading peculiarities of the various forms of cancer that occur in surgical practice, with reference to the question of diagnosis. The subject is treated under the following heads: 1. *General Character and Classification of Cancerous Tumors;* 2. *The Pathology and Symptomatology of Cancer;* 3. *The Anatomy of Cancer;* 4. *Colloid Cancer;* 5. *Epithelioma.*

The elements of diagnosis as classified by the author are embraced in the following divisions:

I. Ætiology.—1. Hereditary. 2. Personal, sex, age, previous health, exciting causes.

II. Symtomatology.

A. *Special Previous History.*—1. Progress of growth. 2. Patient's general health during that progress.

B. *Conditions of Patient when first brought under Observation.*—1. Local phenomena. 2. General phenomena.

C. *Anatomy of the Tumor.*—1. Naked eye characters. 2. Microscopic characters.

In the discussion of these topics, the author exhibits that familiarity with the disease in question so essential to its practical illustration, and seems to have studied it in all its details, with an intelligent zeal. He does not, however, advance beyond the present limits of our knowledge of cancer, nor can we discover that he has determined the exact value of any sign, symptom, or appearance hitherto doubtful.

In regard to the value of the microscope in the diagnosis of cancer, Mr. Laurence concludes :

1. That in the greater number of cases of cancerous tumors, the so-called cancer-cell will be found.
2. That this form of cell is occasionally seen in growths manifestly innocent.
3. That *vice versa* (what is, however, less frequent) tumors anatomically innocent prove clinically malignant, that the cancer-cell is not the *sine quâ non* character of cancer.
4. That the inferences drawn from the microscopic examination are not to be deduced from a few isolated cells that may have happened to strike the eye, but rather from the character of all the cells, and of the field of view generally.
5. That the results afforded by the microscope must take a position, but not an exclusive and overbalancing one, in the series of data, which are to serve us as the premises of our conclusion.

We have not, therefore, in the diagnosis of cancer, as yet, either a pathognomonic symptom, or a purely characteristic appearance. History, symptoms, appearances, and every fact relating to the growth must, as before the days of the microscope, be studied together, and the portions of each carefully estimated.

Mr. Laurence, after giving the clinical history of epithelioma, or epithelial cancer, reviews the evidences of its cancerous nature, and concludes that "Epithelioma is a local disease (quite distinct from cancer), and if it is completely removed, before any affection of the lymphatic glands, the patient becomes permanently cured." In this view he differs from Paget, but is sustained by Lebert and Bennett.

A letter to the author from Prof. Hannover of Copenhagen, from which we make the following extracts, concludes the work : "In no other country (and I have carefully studied all the museums of Belgium, Paris, and nearly the whole of Germany, on this point) does epithelioma, as far as I know, so frequently terminate in death, as in England. I may assert that here, at Copenhagen, where I have, for a series of years, examined nearly every cancerous and epithelial tumor that has been operated upon in the hospitals, it is fatal only in one out of every ten cases ; whilst the impression I derived in England was, that there, only one out of every ten cases was saved. As far as Denmark is concerned, my opinion is that cancer is always fatal ; that, on the contrary, epithelioma is always curable and eradicable without endangering the life of the patient. Both of these rules meet with very few exceptions in Copenhagen : cancer always returns ; epithelioma but exceptionally, and only after incomplete operations, and even the recurrence of epithelioma is, *per se*, without danger. I am perfectly aware that the experience in England is completely opposed to these facts. I must more especially state, that affection of the glands is, at Copenhagen, a matter of the most extreme rarity; in England, nearly constant. I look upon this as one of the chief reasons for the malignancy of epithelioma in England. . . . . Epithelioma of the extremities and penis are here excessively rare; I have never seen, here, a case in the scrotum. . . . The conviction has every day more deeply rooted itself in my mind that cancer and epithelioma must be separated, not merely as *species*, but as *genera*.

ART. X.—*Of Nature and Art in the Cure of Disease.* By SIR JOHN FORBES, M.D., D.C.L., F.R.S., Fellow of the Royal College of Physicians, etc. From the second London edition. New York: S. S. & W. Wood, 1858, pp. 261.

Brief Expositions of Rational Medicine, to which is prefixed the Paradise of Doctors. A Fable. By JACOB BIGELOW, M.D. Boston: Phillips, Sampson & Co., 1858, pp. 69.

On Medicine and Medical Education: Three Lectures, with Notes and an Appendix. BY W. T. GAIRDNER, M.D., Fellow of the Royal College of Physicians, Edinburgh. Edinburgh: Sutherland & Knox, 1858, pp. 130.

THE first two works placed at the head of this article are the productions of two physicians of advanced age and large reputation. Both alike have enjoyed the confidence and esteem of their brethren, the former in England, and the latter in this country; and simultaneously they have prepared as a legacy for their profession treatises containing the wisdom of their life-long experience.

Those who are familiar with the opinions of Dr. Forbes, while editor of the *British and Foreign Medical Review*, will not be surprised that the theme of his work is the *power of nature* and the *insufficiency of art* in the cure of disease. The basis of his reasoning is the naturalness of disease, and his argument is to prove the tendency of disease to terminate in health. To establish these points, he examines at length the causes, course, and terminations of disease, and the evidence of its curability by nature. Having proven the power of nature in the cure of disease, the author passes in review the pretensions of medical art, the various remedies employed, and estimates the power which they exert in individual diseases. His conclusions are, that the power of nature in the cure of disease is far too little relied on, while the power of art is greatly over-estimated. The work is ably written, and abounds with useful and practical suggestions. And while we dissent from many of the author's positions and inferences, we can but express the wish that every practitioner could read the work, and profit by the lessons which it teaches.

Dr. Jackson's work consists of a humorous address—*The Paradise of*

Doctors—A Fable, and a chapter *on Rational Medicine.* It is, as a whole, a repetition of the views of Dr. Forbes.

Dr. Gairdner's small volume contains—1. *An Introductory Address;* 2. *On the Medical Art*, considered in connection with popular education; 3. *On the Study of Medicine as an Art*, with notes and an appendix. These lectures are admirably written, and are replete with sound and healthful doctrines. The author is animated with the spirit of investigation which characterizes modern scientific medicine, and it is truly refreshing to turn from the doubts and forebodings of the preceding authors, to the just discriminations, the ardent zeal in the pursuit of truth, and the lively faith which these lectures exhibit.

ART. XI.—*Selections from favorite Prescriptions of living American Practitioners.* By HORACE GREEN, M.D., LL.D. New York: Wiley & Halstead, 1858, pp. 206.

Proceedings of the American Pharmaceutical Association. Sixth and Seventh Annual Reports. 1857–1858.

Concentrated Organic Medicines; being a Practical Exposition of the Therapeutics, Properties and Clinical Employment of the combined proximate Medicinal Constituents of Indigenous and Foreign Plants. By GROVER COE, M.D. New York, 1858.

DR. GREEN has been accustomed to request from the physicians who for many years have daily called upon him from all parts of the Union, numbering nearly a thousand annually, copies of their favorite prescriptions. In this way he has collected "two large manuscript volumes of medical formulæ, many of them being contributed by the most distinguished American physicians." He has been induced to give this collection of formulæ the more stable form of a book at the solicitation of medical friends in whose judgment he has much confidence.

The work consists of fourteen chapters, embracing the several divisions of remedies according to their therapeutical action. The author is not mistaken in his estimate of the value which the profession will place upon his labors. If the experience of age and wisdom is worth anything in medicine, the department of therapeutics must be improved by such contributions. We recommend the volume to practitioners as a collection of prescriptions, well arranged with appropriate and judicious remarks on their various uses.

The American Pharmaceutical Association, which was organized in 1852, has become a most active, working body; their sixth and seventh annual publications are volumes of much importance, and give gratifying evidence of the interest that druggists are beginning to feel in their profession.

We recommend these transactions to the attention of physicians, as they contain much valuable matter relating to pharmacy. The volume for the present year, of 486 pages, may be had neatly bound for one dollar.

The work of Dr. Coe emanates from the establishment of Messrs. Keith & Co., of this city, and is devoted to an exposition of the therapeutical uses of the remedies which they manufacture.

Art. XII.—*Epilepsy and other Convulsive Affections, their Pathology and Treatment.* By Charles Bland Radcliffe, M.D., Physician to the Westminster Hospital, etc. Second edition, revised and enlarged. London: John Churchill, 1858.

The theory of Dr. Radcliffe is based upon the existence of animal electricity, as determined by Matteucci. Dr. du Bois Reymond investigated the subject still farther, and proved the constant presence of currents in several tissues, as the nerves and muscles. It is to the presence of this electricity and its normal circulation through the muscles that their *elongation* is due, and its absence or interruption induces contractions.

Dr. Radcliffe lays down in his introduction three propositions as the basis of the pathology and treatment of convulsive affections.

1. Muscular contraction is not produced by the stimulation of any property of contractility belonging to muscle.

2. Muscular elongation is produced by the simple physical action of certain agents, electricity and others, and muscular contraction is the simple physical consequence of the cessation of this action.

3. The special muscular movements which are concerned in carrying on the circulation—the rhythm of the heart and those movements of the vessels which are independent of the heart—are susceptible of a physical explanation, when they are interpreted upon the previous view of muscular action.

We cannot follow Dr. Radcliffe in his ingenious speculations, but having glanced at his theory, we will simply refer, in conclusion, to his views of the pathology and treatment of convulsive affections.

Elongation being the positive, and contraction the negative condition of muscles, according to this theory, convulsions indicate deficient energy in the electrical element. All convulsive affections, therefore, point to a depressed condition of system—a want of vital force. Epilepsy, which is taken as the type of convulsive diseases, is believed by the author to show in all cases a depression of the vital energies. In this view, the treatment of convulsive affections must always be tonic and stimulating.

We regard this work as a valuable contribution to the literature of convulsive diseases, and though the theory advanced as the basis of a new pathological view is by no means elaborated, yet it certainly explains in a rational manner much that heretofore has been obscured.

☞ Reviews of recent publications on anæsthesia, obstetrics, surgery, and practice, which have been crowded out, will appear in the next number of the Journal.

PART THIRD.

MEDICAL RETROSPECT.

Report on the Progress of Obstetrical Science and Diseases of Women; prepared for the New York Journal of Medicine. By E. Noeggerath, M.D., Physician to the Female Department of the ([illegible]) street German Dispensary of the City of New York.

(Continued from p. [illegible], Vol. V.)

III.—PATHOLOGY OF NON-PREGNANT WOMEN.

1. *F. A. Aran. Analysis of the general rules for treating the diseases of the womb and its appendages* (*Bull. gén. de Thérapeutique*, 30 April to 15 May, 1858).—Both local and general treatment for every disease of the womb are of equal importance, and every single case has to be treated individually. The different abnormal conditions of the womb, as detected by examination, do not always demand special treatment, for only in those instances where they really disturb the health and comfort of the patient they have to be removed as far as possible. In most cases we must be satisfied with a palliative treatment, because it is very rarely desirable or within the limits of our art, to push treatment so far as to reduce the womb to its natural condition. All that is required for a perfect cure consists in a lasting and entire removal of the functional disturbances.

The principal therapeutical indications to be attended to in the greatest number of uterine diseases may be comprised as follows: congestion, pain, profuse secretions, hypertrophy, and alterations in the position of the womb.

As the congestion has its chief source in the monthly afflux of blood to the womb, we have—1, to diminish the state of congestion during the catamenia, and 2, to remove the state of congestion that remains after every period up to the next time. To diminish congestion during the menstrual term, Dr. Aran recommends the application of leeches, and cautions against the rule of hydrotherapists who use cold water baths, because he has seen alarming symptoms following their application.

The state of congestion after menstruation may be active or passive. In the former instance local antiphlogistics are to be used, while revulsive remedies (cold, external irritantia) are to be applied in passive congestion, depending upon a general or local state of atony.

The *pain* often depends on congestion or other lesions, and disappears upon the removal of the causes. In other instances, we are unable to find out the causes of pain, or it is so predominant that we have to direct our remedies against this symptom alone. If the pain is more of a spasmodic character (coliques-utérines), the castoreum, camphor, and the different preparations of ammonia are generally prescribed successfully. But more often we are called to combat hyperæsthesia and neuralgia, and Dr. Aran highly recommends the local application of opium to the neck of the womb. He believes that he has rendered a great service to the profession by this advice, because it is free from evil consequences, such as nausea, constipation, etc., circumstances always following its general administration. [The writer's experience is opposed to Dr. Aran's proposition. I have often applied opium to the neck and to the inner surface of the womb. If it was given in a sufficiently large dose to soothe uterine pain, its influence upon the system never failed to manifest itself. In the case of a lady to whom I applied it lately, it gave rise to such alarming symptoms, as vomiting violently, and speaking as if in a trance for many hours.—E. N.] Other remedies, but with a much more transient effect, are cold, chloroform and carbonic acid gas.

Profuse secretions have to be attended to especially, because their presence alone is often sufficient to produce irritation and ulceration of the tissues with which they are in contact. Therefore, injections are of great value, be it of water alone or of medicated solutions. Besides injections, the application of revulsive remedies, such as vapor baths, and more especially strong purgative injections, are of the greatest value.

Against the *hypertrophy* a local and general resolutive treatment has to be resorted to. The latter comprises the cutaneous and intestinal revulsives, and the internal administration of alteratives, such as mercury, iodine, arsenic, etc. These remedies are not only to be applied till the uterus is reduced to its natural size, but till the functional disturbances arising from hypertrophy are removed.

The *displacements* of the womb ought to be attended to as soon as they begin to disturb the patient's health. For this purpose the womb has to be replaced and maintained in its right position. In very many cases it is sufficient to unload the intestinal tube in order to prevent its pressure upon the uterus.

Besides attending to falling of the womb itself, we have to treat the *functional derangements of the neighboring organs.* Above all, constipation is a most common coincidence with uterine disease. The best way of regulating the activity of the alimentary canal is by the use of plain or medicated injections once or twice a day.

Dysuria, in uterine affections, is very often owing to an abnormal state of the urine itself, being overloaded with urea, or uric acid. If this is the case, the alkaline mineral waters are of the greatest use. The best way to regulate the *disturbed functions of the stomach* is a proper diet. Dr. Aran recommends roast meat above all, hydrotherapy, mineral waters, and sea-bathing. While hydrotherapy may be used at every stage of the disease, the use of mineral waters and sea-bathing must be dispensed with until the first and gravest local symptoms are removed. [Altogether, Dr. Aran's notions of the therapeutical value of mineral waters are unsettled. He thinks that there is no difference in recommending a sulphuretted or a merely alkaline water, provided one is recommended. The application of waters containing iron is proposed as something new, while Dr. Aran ought to know that they were in use in Germany for the cure of uterine disease half a century ago. E. N.]

It often happens, at the close of treatment, that while the local lesions seem to be removed, the patient is troubled with violent pains. These pains, after some time, disappear spontaneously, and it would be wrong to subdue them by another energetic medication. This is the time when the patients are sent to the country or sea-shore with the greatest benefit.

The treatment of uterine disease has to be continued for a great length of time before the physician can be satisfied that the good effects obtained will be lasting, and the disease, if not cured entirely, will not fail to return soon and severely.

2. *Dr. T. H. Brower on two cases of ovarian dropsy successfully treated* (*The Chicago Med. Jour.*, May, 1858).—Two cases are reported, in which Dr. T. B. Brown's method of *compression* after tapping were resorted to. After the cyst has been emptied by a large trocar, compresses of lint are so arranged as to present a convex surface, and adapted as nicely as possible to the concavity of the pelvis; over these, straps of adhesive plaster should be applied, so as to embrace the spine, meeting and crossing in front, and be extended from the vertebral articulation of the eighth rib to the sacrum. Over this strapping, a broad flannel roller, or a band with strings and loops which tie or lace in front, may be applied.

The first case treated in this way by Dr. Brower, was that of a unilocular cyst, in which ten pints of clear fluid had been drawn off by the trocar. It resulted in a radical cure of the ovarian disease, and restoration of general health, six months having elapsed without any appearance of a return of the disease. In 1845 the same operation was practised upon a similar case, in which two distinct cysts occupied the right hypochondriac region. In the course of the first forty-eight hours, severe peritonitis set in, which was promptly subdued, and the case progressed to a final and radical cure. [The writer is of opinion that the last mentioned case cannot be counted at all. We do not know whether it was the pressure or the peritonitis that effected the cure. E. N.]

3. *Dr. G. Simon on the treatment of fistula vesico-vaginalis and vesico-uterinalis* (*A paper read before the meeting of Rhenish physicians in Darmstadt. Monatsschrift für Geburtsk*, July, 1858).—In order to prove more satisfactorily the results of his method, Dr. Simon had invited all the women operated upon within three and a half years, and most of the number presented themselves to the society, in order to be examined by the physicians present.

Of nineteen fistulæ, ten were healed completely; five incompletely, *i. e.*, they had to undergo a course of caustic treatment for small openings of the size of a pin's head, left open after the operation; only one fistula was sent back uncured; two women died after the operation; a third woman died after a preliminary operation. Of the perfectly cured cases, six were treated by the wet suture in eight operations; two by the wet suture, and after-treatment with caustic; two originally very small fistulæ were cured by the application of caustic alone. These different fistulæ were seated in very different locations.

One was a case of fistula vesico-uterina, *i. e*, the cavity of the uterine neck was connected with the bladder without touching the vagina. The incontinence of urine was treated by antero-posterior obliteration of the os uteri. The woman is at present quite at her ease, while the menstrual blood is discharged through the urethra every four weeks.

Another woman was affected with a so-called *deep vesico-uterino-vaginal fistula*, *i. e.*, the anterior lip of the uterus, and a portion of the bladder and vagina, were destroyed. The fistula was cured by uniting the posterior lip with the wall of the bladder. In this case the menses also flow through the bladder.

A third woman had a very large fistula, which extended from the neck of the bladder up to the os uteri. In this case the loss of substance was covered by the anterior lip of the uterus. This woman was entirely cured, and afterwards gave birth to a living child.

Those fistulæ cured by cauterization alone were of a very small size.

Of the *almost entirely* healed fistulæ, three were so large that the loss of substance involved the entire base of the bladder up to its urethral portion, so that the only means left for operation was the *antero-posterior obliteration of the vagina.* All of these women were greatly benefited by this operation, *i. e.*, they only lost a few drops of urine when exercising too much.

The only case *not cured* was that of a woman with a fistula of enormous size, where also the sphincter vesicæ was destroyed. As the union of the fistulous edges could not be effected after several operations, episorrhaphia was resorted to, but a small opening always remained, and could not be healed up.

Two of the women who *died* after the operation were seized with pyæmia, while one perished seventeen days after the operation from purulent inflammation of the cellular tissue surrounding the bladder, uterus and rectum, with consecutive perforation into the peritoneal cavity.

The conditions on which the successful operations for vesico-vaginal fistulæ are based are two: 1, the edges of the wound have to be approximated in such a manner that they offer a broad and healthy surface for subsequent union; 2, the edges must be united so that they cover each other entirely, and suffer no undue pressure from the suture. As simple as these principles appear to be at first sight, they offer very often much difficulty in execution. Some of these difficulties have lately been diminished by the manœuvre of pulling down the uterus, by the more complete artificial protrusion of the fistula, and by the application of specula better adapted to the purpose.

In order to obtain a sufficiently broad near surface, the fistula must be cut in the shape of a funnel, the point of which is turned inwardly, while its long diameter runs in the lateral diameter of the vagina in the greatest number of cases. In cutting out this funnel, Dr. Simon pushes a pointed bistoury through the mucous membrane of the bladder in a diagonal direction towards the vaginal wall, and enlarges the opening around the fistula with the bistoury. He thinks that this method (wounding the wall of the bladder) does more towards healing than Wutzer's method, which cuts only the vaginal portion.

For the suture, Dr. Simon applies exclusively a silk thread, because the other sutures applied, such as pins, are more difficult to use, and often impracticable when the fistula is situated laterally. [Dr. Simon seems to be unacquainted with Dr. Sims' silver wire, or he would certainly acknowledge its superiority. E. N.]

Dr. Jobert's "*opération plastique par glissement*," by which the lateral tension of the wound is intended to be overcome, is no longer practised by Dr. Simon. He attains the same purpose by a few sutures piercing the vagina at points a considerable distance from the wound, while the other sutures, intended for the healing of the wound, are placed close to the edges.

Fistulæ of so great a size that a direct union of their edges cannot any more be thought of, must be treated by *antero-posterior obliteration of the vagina.* The same operation is to be performed when they are situated in a location that a direct union is dangerous and giving no chance of success, viz., those in the roof of the vagina, where at once the uterus is immovable.

In performing this operation, the lower portion of the vesico-vaginal wall left is united with the posterior wall of the vagina, thus forming a sac surrounded by the upper portion of the vagina, and the anterior and lateral sections of the bladder, issuing into the undisturbed urethra.

The antero-posterior obliteration of the vagina has many advantages over the other methods (episorrhaphia and transplantation) hitherto applied in the same classes of cases; 1, it offers more chances for healing; 2, it is connected with no danger, as only superficial layers of the membranes have to be removed; 3, it fulfills perfectly what is required, by arresting the incontinentia urinæ; 4, it has no distressing influence upon the health or comfort of the patient afterwards.

Dr. Simon has performed this operation six times, and the result was better than can be expected, viz., only exceedingly small fistulæ (of the size of a [illegible]) were left in some cases, and in all the urine perfectly retained, except when the patients indulged in too hard work.

Five very small fistulæ were cured by the application of lunar caustic, three of which were left after the operation. In order to have the desired effect of the caustic, the stick must enter into the fistula itself, and touch its deeper portions. These cauterizations have to be repeated only every second, third, or fourth week. If applied more often, the good effect is destroyed.

(*To be continued.*)

CORRESPONDENCE.

Why do our young men go to Paris?—Paris continues to be the favorite resort of foreign students, who are impelled by various considerations to visit it. Among these are many of our own countrymen, who, as a body, form a well-marked feature in the *Quartier Latin.*

Most of the American medical students are young men, who, having just graduated at home, repair to Paris for the purpose of what their affectionate friends call "finishing their education!" This process is supposed to take from three months to two years, and to its accomplishment the dollars of the wealthy "governor" are ungrudgingly applied, or the hard earnings of the poor, but affectionate father, freely given with a blessing and a prayer. In some instances the young man has from the proceeds of his own labor saved the money necessary to support him while thus employed. It is almost unnecessary to state that *frequently* the time and money are well spent—but it is also very true that in a vast majority of cases the student had much better have remained *at home.*

A visit to Paris is not now as indispensably necessary to the perfect acquirement of a medical education as it was in the student days of our fathers. We now have our medical schools by dozens, supplied with teachers who have themselves studied their particular specialties in Europe, who keep themselves "booked up" on all the improvements of the day, and who in their own native tongue can certainly impart information more rapidly and clearly than that received through the medium of a foreign language. We have in addition numerous hospitals where excellent clinical instruction is given by competent physicians and surgeons, and where—what is better––there are many opportunities for the young man to become an assistant or dresser, and thus familiarize himself with disease at the bedside, unmasked by theories and untrammelled by oratory.

Paris is an excellent place for the study of specialties, especially if the student desires to make his living in future by lecturing. There are certainly many advantages for such; but, in our opinion these—great as they are—are much overrated, with perhaps the exceptional instances of those relating to sexual diseases of women, and to cutaneous disorders, both of which are well understood in Paris, and both freely within reach of the student. But the mass of students are those who intend to follow the *general* practice of medicine and surgery. Neglecting the rich advantages that the hospitals of New Orleans, Charleston, Baltimore, Cincinnati, Philadelphia, New York, Boston, and other American cities furnish, scarcely has the young graduate received his "parchment," than—if the "funds" can be so arranged—he is off to Paris! Arrived in that city, his first care after having secured rooms, is usually to engage a French teacher; his next to select his hospitals and "courses." A few days suffices to show him that it is necessary to make the acquaintance of some *interne* in one of the hospitals, generally a "smart" *undergraduate*, and engage him to impart private instruction in a particular branch. This is called taking "private course," and commonly consists of a bedside lecture of an hour's duration, three times a week, for which the sum of 60 francs ($12) is usually expected; occasionally, where two or three club together, the expense is slightly reduced. Dissecting facilities are nominally free to all, but the stranger has to pay taxes in the form of fees to hospital *internes*, demonstrators, etc., which, with incidentals, cause the monthly expenses to amount to nearly, if not quite as much, as they do in New York or

Philadelphia—the only advantage gained being a greater profusion of *material*, which is scarcely of benefit, as it induces haste and carelessness in the work.

A visit to Paris does good in several ways; it teaches that the great professional lights of continental cities are *but human after all*. It shows us that men whose *ipse dixit* is taken for law and gospel by such outside barbarians as ourselves, are but merely the *leaders of cliques* in their own cities, whose statements have but little weight except among their own particular "sets." In Paris as much as in any other large city—perhaps more—do we find cliqueism and mutual distrust, jealousy, and disbelief, rife and universal among members of our profession. Among rivals facts are denied, reasoning changed, and positive assertions met with that indescribable *shrug of the shoulder*, showing general distrust in each other's truthfulness, sagacity, or sincerity. Familiar examples of cliqueism, mutual distrust, and positive opposition in teachings and in practice may be seen in the cases of the leading rivals in the specialty of venereal diseases, or in that of the eye. These are but well-marked examples of the general attitude of the Parisian medical profession and the position of its luminaries. We have the friends of the *Ecraseur*, and we have its determined opponents. We have those who bleed and purge in typhus fever, and we have those who treat their cases in a very different manner; and in fact in almost every case where a decidedly strong ground is taken by a man of mark in favor of a particular theory or hobby, we have some equally intelligent and well-known individual holding opposite ground. To such a place do our young medical men rush to finish their education! neglecting home advantages and exchanging the solid practical education derived from such sources as the sound, clear, philosophical and truthful doctrines of Astley Cooper, John Hunter, and hosts of others both living and dead, for the gaseous *pabulum* furnished by Malgaigne *et omne id genus*.

Read Malgaigne's work on fractures—*vast, erudite, and profound!* Go into the fracture wards of that distinguished surgeon, and witness *deformity, bungling, and imbecility!* Let us ask the most rabid *pro Gallic* student, whether in case he should fracture his femur, he would commit its treatment to the tender mercies of French surgery, even with Malgaigne at the helm. What would our answer be? Probably in this wise: "Get an American or an Englishman to attend to me. *the French don't treat fractures well.*" And now let us ask what do they treat well? Do the French physicians treat typhus well? or erysipelas? phthisis, cardiac disease or urinary disorders? Can they amputate better than we do? Can they tie an artery better, or cure a diseased knee-joint? Wherein lies their excellence? a few brief words will answer. The French excel in certain microscopical minutiæ, in small details, and fanciful profoundness of investigation; but as bedside practitioners we do not find that, outside of a few specialties, their success equals our expectations.

For ourselves, we consider that the great aim of medical science should be to *prolong human life and to lessen human suffering*. The country where this point is the most nearly arrived at should be that most resorted to by students of every nation. Is France entitled to this distinction? We should think not. In 1854, the deaths in the hospitals under the general administration at Paris, amounted in the average to one in every six and a half patients. Opposed to this, we find that the report of the New York Hospital* for the year 1856, gives a record of 3,274 patients treated, of whom 291 died, making an average of about one out of every 11¼ patients. When we reflect upon the number of "coroner's cases," or those produced by poison or by fearful and violent accidents, such as fractures of the skull, gunshot wounds, railroad injuries, concussions of the brain, sun-stroke, etc., which are contained in the records of the New York Hospital, and forming more than a quarter of the deaths reported, the wide difference in the successful treatment of disease is much more manifest. If we American physicians and surgeons, despite the bad character of our cases, our drunkards and our violence, our stabs, steamboat explosions, railroad disasters, etc., are able to show a mortality in a *hospital solely for acute diseases*, of but one to nearly two when compared with that of the hospitals of the whole of the French metropolis, where, owing to efficient police regulations, coroners cases and "great disasters" are very rare—if, as we say, we are able, despite such disadvantages, to bear such an exceedingly favorable comparison in our results, why do our young men leave the sound, safe, reliable, and judicious instructions of that hospital, and of many other similar institutions in our own country, for the teachings of under-graduate *internes*—for the privilege of taking a private course with an eminent specialist, "who has no connection with the man across the way"—his rival—or for the great advantage of following in the wake of Jobert, Nélaton, Becquerel, Trousseau, or Velpeau, eagerly endeavoring to see through a crowd of students "five deep," and a mass of hats and white bed-curtains? Under such circumstances, the words of the "luminary" are but faintly understood, and the patient simply a "remote circumstance."

Reader, we are not inveighing against a course of Parisian study when properly undertaken and systematically carried out with judgment and industry; but we wish to raise our voice against this indiscriminate rush of young men to Paris, to the great neglect of the hospital and other advantages which they have at home. In our opinion, one year spent in one of our own hospitals will do more good and fit an intelligent young man better to practice his profession successfully, in prolonging the lives of his patients, or in diminishing their sufferings, than three years in Paris, or two in London, spent in the ordinary manner. There, foreigners like ourselves, can hardly expect chances as "*internes*" in the hospitals; we are consequently thrown with the sea of students—with the "vulgar herd" of such as, like our-

---

* A report of the New York Hospital for the year 1856 happened to be at hand. As we had, conveniently, no other means of making a comparison of results, we were obliged—at the risk of seeming partiality—to avail ourselves of the statistics thus furnished. We regret exceedingly that we have neither the time nor the requisite data for giving a comparative view of the mortality in our great American hospitals, and that of the hospitals of London, Vienna, Paris, and the larger continental cities.

[illegible] or occasions. At home, on the contrary, there is scarcely an exception, where a young man really desires a hospital berth, but what industry, fixedness of purpose, and a little diplomacy, will secure it for him.

In Paris there is always to be found a class of young men who are perfectly insane on the subject of the advantages of Paris! These are mostly young men who, never having studied before, go to Paris, and, for the first time in their lives, really endeavor diligently to improve themselves. Such, of course, quickly find out that they are learning every hour! Elated with the discovery, they ascribe it all to Paris—magical Paris!

Another class find it greatly to their interest to praise Paris, because by doing so, they are increasing their own éclat at home. Still another class are the specialists, who, certainly, generally are much improved by a residence in London, Paris, or Vienna; these, with a few students who having carefully studied at home, after spending one or two years in their native hospitals, or several years in the practice of their profession, repair to Paris, and by reason of previous training, can readily pick out the wheat from the chaff. These are the men who are benefited by a Parisian course—who can stand the glitter, humbug, mystery and reputation of theorists, specialists, and lecturers, and return home benefited and improved by their foreign sojourn. S

Report of Cases of Treatment of Curvature of Spine (continued). By J. A. [illegible], M.D., of Boston.

Case 5.—The history of the following case was furnished by Dr. Lyman Bartlett, of New Bedford, Mass., who attended the patient through the fever to which allusion is made, the patient still continuing under his charge up to the time I first saw her.

Miss Elizabeth [illegible], aged 16, bluish grey eyes, light florid complexion, dark brown hair, of scrofulous and consumptive family, was attacked with *typhoid fever* about September 12th, 1857. The fever became of unusual severity, insomuch that from the 30th September to the 3d October her life was despaired of. She began to mend and continued slowly convalescent from about the 20th October. From the 1st to the 9th December, she was able to sit up in a chair for several hours daily.

About the 6th December, she began to complain of pain in the back on sitting up. On the 10th December, after sitting up longer than usual, she was attacked with severe pain in the region of the first lumbar vertebra. This continued for two or three weeks with such severity that she could not be turned in bed; and was only relieved by pressure of the hand, constantly applied day and night for the period of nearly a week.

On examination (made with great difficulty on account of the pain caused by moving her), a curvature of the spine was discovered of the length of about four vertebrae, having its centre between the last dorsal and first lumbar vertebrae, and to the degree represented below, as nearly as could be judged; her condition rendering an exact outline drawing impracticable.

She had severe bed-sores over both trochanters, then of some six weeks standing, and which were not entirely healed until the February following.

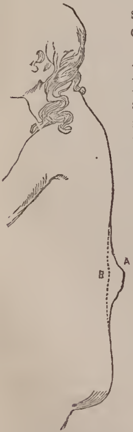
Her emaciation was extreme, greater than ever before witnessed by the writer in any case from any cause.

On raising her out of the hollow in the bed into which she had settled, and making extension and counter extension from the ankles and head, the curvation was somewhat reduced and the pain in the spine diminished. This partial relief was continued by the firm application of a broad swathe around the loins.

Her condition did not materially improve, however, until after the 12th January, 1858, at which time Dr. J. A. Wood applied his apparatus for disease of the spine.

Her *great emaciation* rendered it difficult to fit the apparatus so as not to give her annoyance for several days. So *scraggy* was she, that it seemed like an attempt to fit stays to a *gun-lock*. By means of much padding, however, Dr. Wood succeeded, and, in the course of three or four days, relief was complete whilst the apparatus was applied; but pain returned for several months afterwards whenever the apparatus was removed.

Now, July 24, 1858, she has been able to sit up three or four hours a day for several weeks past without suffering, and can turn in bed as well as ever she could.



Her flesh and strength are now very fair, and steadily improving. She may be considered nearly cured.

In the appended cut, A represents the character and degree of deformity, as described by Dr. Bartlett, that existed previous to an attempt at its reduction and relief of the patient. B represents the position of the spinal column at the point of curvature, eight months after the commencement of treatment, the general health and strength of the patient at the same time rapidly improving.

Case 6.—Son of Mr. Charles T. Stevens, No. 8 New Prince street, Boston, Mass., aged 5 years, of light, rather florid complexion and scrofulous diathesis, was placed under my charge for treatment of Pott's disease of the spine, March 30, 1857.

The case then presented an angular curvature of the spine projecting, posteriorly, nearly one and a quarter inch, involving the three lower, and having for its centre the eleventh dorsal vertebræ. The body inclined considerably to one side, and the left hip was elevated one and a half inch above the right.

Respiration was hurried and laborious, and partial paralysis of one leg, with other impediments, rendered locomotion somewhat difficult.

From the mother I obtained the following history of the case, from its commencement to the time that it was placed under my care.

In March, 1854, at the age of two years, the patient was attacked with lung fever, whooping-cough supervening; the sickness was protracted and severe, characterized with great prostration, copious sweating, and ultimately extreme emaciation.

In the autumn succeeding the attack, the cough still continuing from the first, hemorrhage from the lungs ensued, of which there were several attacks, and at one time, in the space of twenty-four hours, there were, by estimation, from three to four ounces of blood thrown up in the act of coughing; the patient becoming more prostrate and pallid, little or no hopes were entertained of his recovery.

In April, 1855, at the expiration of one year from the commencement of this sickness, the patient had, however, nearly recovered, when he was attacked with severe pain in the bowels and partial paralysis of the lower extremities accompanying; he was deprived of the power of locomotion, which did not return again in any degree until the expiration of eight or ten months. Difficult respiration and a tumid state of the abdomen then existed to a marked degree. In the spring of 1856, a small knuckle was discovered projecting from that portion of the spinal column, already referred to, which continued to increase, with a recurrence of the pain in the bowels, at intervals, with all the general symptoms, more or less aggravated, that usually attend such cases.

March 30, 1857.—The progress of the disease has continued unabated up to the present time, and resisted all attempts to arrest it by mechanical or other means employed for that purpose, which, as remarked by the mother, were resorted to soon after the trouble was first discovered.

My treatment of *this* case was entirely mechanical, accompanied with such instructions in reference to the general health of the patient, as should usually be observed in a normal or healthy state of the system.

An apparatus was constructed to meet all the indications in the case as well as possible, by giving that support to the spinal column which would, in the most efficient manner, relieve the affected part from all undue pressure from the weight of the superior portion of the body, as well as to prevent the evil consequences of the various motions of the body at that point.

The apparatus was adjusted and readjusted as often as the circumstances in the case required, with a *direct* bearing upon the transverse processes of the projecting vertebræ.

By this arrangement, the bowels are elevated and retained in their proper position by gentle support, thus relieving the superior portion of the body from a dragging weight that serves not only to enhance the original trouble, but greatly to embarrass respiration.

Convalescence commenced at once and continued without interruption.

The curvature is completely reduced, the patient has grown well, and is now straight, robust and healthy.

Boston, *Dec.* 8, 1858.

Monsel's persulphate of iron.—New hæmostatic and astringent tonic. By Joseph C. Hutchison, M.D., Surg. to the Brooklyn City Hospital.

Having recently used the above agent (which was introduced to the notice of the profession, by M. Monsel of Bordeaux), in the following cases with the most gratifying results, I present them as some evidence of its superiority as a hæmostatic.

Case 1.—While assisting Dr. Isaacs to perform Cooper's operation of excising a portion of the scrotum for varicocele, on a patient in the Brooklyn City Hospital, I applied, with his permission, the persulphate to arrest the copious capillary hemorrhage which always occurs during operations on this tissue. Instantaneous coagulation occurred with satisfactory results.

Case 2.—In a case of profuse epistaxis caused by a blow on the nose, which probably produced rupture of some of the larger capillaries, a narrow strip of lint saturated with the solution was introduced into the nostril, which at once produced a hard coagulum, and arrested the hemorrhage instantly.

Case 3.—In this instance the effects of the persulphate were most marked. A few days since, while Dr. Minor was operating for necrosis of the femur on a patient in the Brooklyn City Hospital, an artery of considerable size was cut and we were about applying a ligature, when the doctor suggested a trial of Monsel's solution, which at once arrested the hemorrhage, very much to the surprise of all present.

The article which I used was prepared by Dr. E. R. Squibb, lately of the United States Navy, who, the profession will be glad to know, has recently established a laboratory here for supplying the U. S. Army and the medical profession generally, with pharmaceutical chemicals of such a standard of purity as has not hitherto been accessible to them.

EDITORIAL.

Training of Idiots.—On visiting an asylum for idiots recently, where we witnessed remarkable exhibitions of scholarship among its inmates, we had occasion to pass, in company with the physician, a group of laborers busily engaged in grading and beautifying the grounds. A friend remarked facetiously to the physician, "I suppose these men are idiots also?" and was not a little surprised to learn that these intelligent laborers, the foreman included, were once the most hopeless of idiots,—several of whom, when first brought to the Asylum, neither walked, fed themselves, or even noticed objects around them.

No persons, in any community, are regarded with such absolute pity and such utter aversion as idiots. The insane excite feelings of commiseration, and receive the warmest sympathy and the most studied care. To restore to society an aberrant intellect, and to the social and domestic circle a companion, whose moral sense is lost, we build magnificent asylums, and luxurious retreats with lavish expenditure of money; but the poor idiot, whose mind has never been illuminated by the first gleam of intelligence, is left to lead a life more humble and degraded than the brute, a burden to its parents, and a common nuisance in the community. Within the limits of this State there are 1,812 of these miserable outcasts, doomed to a mere vegetable life. Of this number one-third are under twenty, and nearly two-thirds under thirty years of age.

But it is now demonstrated, that of these two classes, the idiot, placed under proper discipline, is much the more hopeful, and is, indeed, susceptible of a high degree of mental and physical development. The imbecile of the lowest grade, that has neither sense nor power to feed itself, but lives like a plant, may be transformed into a rational being, and be made capable not only of self-preservation, but of earning a livelihood. If to restore sight to the blind and hearing to the deaf, was once accounted a miracle, how shall we estimate the power by which rationality, moral sense, and mental and physical activity are given to the imbecile?

Modern science has opened no field where true philanthropy can gather richer fruits than that of the physical and moral training of idiots. It is a reproach to our profession that it does so little to enlighten the public in regard to the possibility of rendering this class of persons capable of self-protection and self-preservation. We desire to call the attention of our readers to the fact, that we have an Institution for the training of idiots, located in New York, and under the superintendence of Mr. JAMES B. RICHARDS, one of the most capable and successful instructors of idiots in this country. The Institution is pleasantly situated on the upper part of the island, at a point which combines the healthful influences of the country and the facilities of the city. The imbecile child, on entering this retreat, becomes the object of tender solicitude, and while enjoying the comforts of home, receives that constant physical and mental training essential to the development of his faculties. We earnestly entreat physicians who may have idiots in the circle of their acquaintance, to urge upon such parents the extreme importance of placing their children at once, while young and most susceptible, in an institution devoted to their instruction. We trust physicians will also communicate promptly to Mr. Richards such facts as he requests in the circular transmitted to them. Should they not receive a circular, he would take it as a favor if physicians, in any part of the United States, would inform him of the name and address of the parents of idiot children. Letters directed to JAMES B. RICHARDS, *Harlem, New York*, will be promptly answered.

Medical Registration and Medical Peerages in England.—It is gratifying to witness the progress of the medical profession of England in popular favor and esteem. The Registration Act which recently passed Parliament provides, in order "that persons requiring medical aid should be enabled to distinguish qualified from unqualified practitioners," for the registration of all persons who are regularly licensed to practice by the universities and chartered medical bodies. The entire profession being thus united on a firm legal basis, the Act further provides:

> That "after the 1st day of January, 1859, no person shall be entitled to recover any charge in any court of law for any medical or surgical advice, attendance, or for the performance of any operation, or for any medicine which he shall have both prescribed and supplied, unless he shall prove upon the trial that he is registered under this Act."
>
> "After the 1st day of January, 1859, the words 'legally qualified medical practitioner,' or 'duly qualified medical practitioner,' or any words importing a person

recognized by law as a medical practitioner or member of the medical profession, when used in any Act of Parliament, shall be construed to mean a person registered under this Act."

"After the 1st day of January, 1859, no person shall hold any appointment as a physician, surgeon, or other medical officer, either in the military or naval service, or in emigrant or other vessels, or in any hospital, infirmary, dispensary, or lying-in hospital, not supported wholly by voluntary contributions, or in any lunatic asylum, gaol, penitentiary, house of industry, parochial or union workhouse or poorhouse, parish union, or other public establishment, body, or institution, or to any friendly or other society for affording mutual relief in sickness, infirmity, or old age, or as a medical officer of health, unless he be registered under this Act."

"After the 1st day of January, 1859, no certificate required by any Act now in force, or that may hereafter be passed, from any physician, surgeon, licentiate in medicine and surgery, or other medical practitioner, shall be valid, unless the person signing the same be registered under this Act."

"Any person who shall willfully and falsely pretend to be, or take or use the name or title, of a physician, doctor of medicine, licentiate in medicine and surgery, bachelor of medicine, surgeon, general practitioner or apothecary, or any name, title, addition, or description implying that he is registered under this Act, or that he is recognized by law as a physician, or surgeon, or licentiate in medicine and surgery, or a practitioner in medicine, or an apothecary, shall, upon a summary conviction for any such offence, pay a sum not exceeding twenty pounds."

The supervision of this act is confided to a Medical Council composed of persons chosen by those chartered bodies and by the crown for a term of five years. This Council has been chosen, and recently held its first session in London. It consists of twenty-three members, all medical men of the highest rank, with Sir Benjamin Brodie at their head.

Not satisfied with this high vantage ground which they have gained, and the complete control of quackery in every form, the medical press of London is beginning to agitate the question of Medical Life Peerages, thus gaining a voice and influence in the House of Lords. Nor is this movement confined to the profession, but the secular press are beginning to advocate the necessity of making the head of the Medical Council, a Lord President. One newspaper has prematurely announced that Mr. Brodie is to be made a peer, with the title of Baron Betchworth; and *Punch* even has added its satire in favor of medical peerages as follows:

If the good sword may claim its fee
  In titles, as our codes determine,
'Twere no unseemly thing to see·
  The scalpel laid away in ermine.

Yon Peer, for having understood
  All the dark labyrinths our laws have,
What saving clause has done the good,
  That Brodie's forceps' saving claws have?

To cut bad throats, and stretch bad necks,
  Are claims on fortune's purblind goddess,
But clear-eyed Honor gladly decks
  The man who heals good people's bodies.

To Readers.—The oxysulphuret of antimony noticed by Dr. Jacobi in the last number of the Journal, must not be mistaken for Kermes mineral. For designation see U. S. Dispensatory, pp. 878, Synon. antimonii sulphuretum aureum, etc. etc.

The patient of Dr. Markoe, the head of whose femur was exsected, did not die of exhaustion as stated, page 85.

CONTENTS.—NO. II.

PART I.—ORIGINAL COMMUNICATIONS.

PAGE

ART. I.—On the Management of the Shoulder in Examination of the Chest. By JOHN W. CORSON, M.D., late Pphysician to City Hospital; Physician to the New York and Eastern Dispensaries; Lecturer on Diseases of the Chest, ... 159

ART. II.—Classification of the Diseases treated at the New York Eye Infirmary during the year 1858, with brief Remarks on the Treatment. By F. J. BUMSTEAD, M.D., Assistant Surgeon, . 186

ART. III.—The Hymen ; an Essay delivered (by appointment) before the "New York Medical Union." By T. GAILLARD THOMAS, M.D., of New York City. 196

ART. IV.—The High Operation for Stone in the Bladder, performed upon an Original Plan, with Essential Modifications and Improvements. By HENRY STUART HEWIT, M.D. . . 217

ART. V.—On the Respiratory Sounds. By J. HERZKA, M.D., . 220

ART. VI.—Report of the Proceedings of the Medical Societies and of the Practice of the Hospitals in New York ; prepared for the NEW YORK JOURNAL OF MEDICINE, by GEORGE F. SHRADY, M.D., Resident Surgeon to the New York Hospital, . . 238

PART II.—CRITICAL ANALYSIS.

ART. VII.—Statistical Report on the Sickness and Mortality in the Army of the United States. 253

ART. VIII.—Review of the 22d Volume of the Memoirs of the Imperial Acad. of Medicine of Paris. By J. W. GREENE, M.D. 256

ART. IX.—Trials of a Public Benefactor, as Illustrated in the Discovery of Etherization. By NATHAN P. RICE, M.D. . . 265

BIBLIOGRAPHICAL NOTICES.

ART. X.—The Transactions of the American Medical Association, 274

ART. XI.—Elements of Pathological Anatomy. By S. D. GROSS, M.D., Prof. of Surgery in the Jefferson Medical College of Philadelphia, ... 275

PAGE

Art. XII.—A Treatise on the Pathology of the Urine, including a Complete Guide to its Analysis. By J. L. W. Thudichum, M.D., ... 275

Art. XIII.—Outlines of a Course of Lectures on the Principles and Practice of Surgery, delivered by E. Geddings, M.D., Prof. of Surgery in the Medical College in the State of South Carolina. 275

Art. XIV.—The Pathology and Treatment of Stricture of the Urethra, and Urinary Fistulæ. By H. Thompson, F.R.S.C., M.B 276

Art. XV.—A Treatise on Diseases of the Air-Passages etc., etc. By Horace Green, M.D., LL.D. 276

Art. XVI.—The Science and Art of Surgery, being a treatise on Surgical Injuries, Diseases, and Operations. By John Erichsen, M.D., ... 276

Art. XVII.—A System of Human Anatomy, general and special. By Erasmus Wilson, F.R.S., ... 277

Art. XVIII.—Contributions to Operative Surgery, and Surgical Pathology. By J. M. Carnochan, M.D., ... 277

Art. XIX.—Lectures on the Principles and Practice of Physic, delivered at King's College, London. By Thos. Watson, M.D. 277

PART III.—MEDICAL RETROSPECT.

Report on the Progress of Obstetrical Science and Diseases of Women; Prepared for the New York Journal of Medicine. By E. Noeggerath, M.D., Physician to the Female Department of the (Canal street) German Dispensary of the City of New York, ... 281

CORRESPONDENCE.

A Case of Regular Menstruation During Pregnancy, . . . 285

On the Treatment of Varicocele by an Improved method, . . . 286

Rupture of the Uterus. By Wm. Meacham, M.D., . . . 287

Asarum Canadense as a Remedy for Dropsy depending upon Albuminuria. By J. R. Black, M.D., ... 299

EDITORIAL.

Death of Samuel Whitney. 291

Award of Prizes in Bellevue Hospital, ... 291

THE NEW YORK
JOURNAL OF MEDICINE

FOR MARCH, 1859.

PART FIRST.
ORIGINAL COMMUNICATIONS.

Art. I.—*On the Management of the Shoulders in Examinations of the Chest.* By John W. Corson, M.D., late Physician to Brooklyn City Hospital ; Physician to the New York and Eastern Dispensaries ; Lecturer on Diseases of the Chest.*

The greatest physician is he who best observes little things. This may not seem flattery, but it is truth. It was the glory of Hippocrates, Jenner, Laennec, Dieffenbach, and Physick, that each, more than others before him, pondered on the lines of a sick face, or the pustule on a dairy-maid's finger, the piping voice from a cavern of lung, the stretching of a cut tendon, or the uniting power of a seton. We excel each other, mainly, in details. Seeming trifles to the non-professional observer, may be to us the harbingers of life or death. The thready pulse, a dusky brow, just a line more of pupil ; or the more distant warnings of a hard tumor, faint whizzing at the heart, an inch of dull and creaking lung, or a waxy face, with a white cloud in the urine, can each foreshadow the gravest of human events. Or, with the turbid urine, a few oily globules seen only through the microscope, may decide the fate of the patient. Indeed, the success of one of us beyond another in cure, often depends on so small a thing as a slight change in diet, or better form of the same drug. Let us not get above our sacred mission. Great things always impress. But the perfection of medical vision is that which neither magnifies nor overlooks. As the trusted guardians of life itself there is really no remedy, no influence, no symptom, too trivial for our thoughtful attention.

---

* Read before the New York Academy of Medicine.

We recall these familiar facts, simply in apology for presenting in this paper some new points in the diagnosis of diseases of the chest, which some may deem too nice. It is only to bespeak them fair play. Nor have we ventured to trespass on the patience of our readers, without testing most of these fancied improvements with some hundreds of cases in this department, in two large Dispensaries of our city, for more than a year past.

As is well known, different chests vary in their sounds with the thickness of their natural coverings. We test this daily. A thinly coated child, a delicate female, or a spare male, gives louder resonance and clearer respiration; while in a fleshy woman or muscular man, these signs are quite diminished. Except the spots with solid viscera beneath, those places, too, with thickest walls, are dullest. Let us search for these last. On examining carefully a human thorax, it will be found that the very tops of the lungs, so important in commencing consumption, are thus *muffled*, as it were, by the bones and muscles which fasten the arm to the trunk. In front, the clavicle is stretched like an arched fender, to keep off the ear or stethoscope. And then a little below, in muscular patients, like a flat cushion, lies the great pectoral. But the most troublesome barriers are behind. Here, nearly the whole apex of the lung is capped by the thick shoulder. The scapula, with its projecting spine and sharp edges, is so uneven, that you can scarcely get a level square inch on which to rest ear or instrument; and then it is so completely padded, with the sub-scapular, serratus, supra-spinous, infra-spinous, trapezius, rhomboid and other muscles, below, above, and all around, that the signs of auscultation and percussion are quite deadened. That careful observer, the late Dr. Swett, in his first lecture, has stated that " you gain very little by percussion posteriorly above the spine of the scapula;" that here " there is little or no resonance;" and that below this, " down to its inferior angle, and anteriorly over the pectoral muscles, the advantages of percussion are quite limited, owing to the thickness of the muscles." In front this doubtless refers to fleshy patients. There is a way to lessen these obstacles. It is a slight imitation of the droll invention of Sidney Smith, who proposed as the most perfect cooler in a hot day, to take off his flesh and sit down in his bones. The arm is used like a pump handle as a lever to stretch and diminish at certain points the flexible walls of the chest. And sometimes the hands are added as hooks to pull.

I. *Retracting the shoulders and arms as in Figure* 1, *by holding the left wrist with the right hand easily behind the loins, so as to thin and expose the front and sides of the chest.**

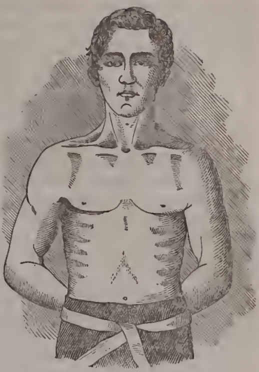


Fig. 1.

If, facing a healthy muscular man, for example, we ask him to place one hand behind the back, while the other hangs naturally by the side, we shall find on accurately comparing the tops of the lungs by auscultation and percussion, that on the tense side the sounds are slightly clearest. This probably results from three causes. First, the *fleshy obstruction is lessened* in thickness so as to hear more plainly the soft murmur of breathing. Next, the muscular substance, thus condensed by tight stretching, like spongy lung made more dense by infiltration or inflammation, becomes actually a *better conductor of sound.* And lastly, the resonance to the tapping fingers is increased, by *tightening* the flat muscles beneath them like a drum-head. And these three simple principles apply to the whole of the movements recommended.

If our subject is further asked to place both hands behind, as described above, the tones of both lungs in front are alike elevated. This experiment in health shows how we thus obtain a higher key and better test of any variation from disease.

And this position has the additional merit of giving that perfect *symmetry* so necessary in these examinations, without the usual awkward expedient of placing the patient, like a recruit, against a wall.

In muscular subjects, too, this thinning the surface at the apex, trifling as it may seem, may aid us in deciding when there is but the first faint suspicion of consumption. Every ray is precious in the dark hour when light is first dawning.

---

* The large drawings previously used in explanations at the Academy of Medicine were by our worthy friend and pupil, Dr. Howard. The present illustrations are exact copies from nature; the first from the chest of a stout youth of twenty, and the remaining five from that of a gentleman aged thirty-five; both either ambrotyped or daguerreotyped in these positions, and engraved by Redman.

With care we may thus intensify to the ear at the top of the lung affected such delicate early signs as rude respiration, prolonged expiration, feeble bronchophony, or the clicking of small scattered tubercles. You may, for a wonder, catch that coy, changeable rustle, like the folding of tissue paper, heard—and then not heard—just before tubercular softening, and which M. Fournet has named "dry crackling."* Or, it is easier to note a shade of dullness on percussion, or feel the least emphatic jar of the voice or cough, as the tips of the fingers are laid softly beneath the clavicles.

But the greatest advantage of this posture, is that anteriorly it is the very best for what is technically termed inspection. And the eye is too important a witness to be neglected here. Facing the patient, at the distance of two or three feet, you thus get the most complete view of the front and sides. Indeed, it is a little arrangement quite artistic. The arms are out of the way; the coat of flesh is drawn closely till it fits like a bandage; the soft parts shrink till the fine interlacing of the muscles appears, and you bring out the fainter lines, as a painter would, with his light and shade. All this helps in comparing. The least stiffness or inequality over either lung from disease is easily detected.

Again, by this pulling back of the shoulders, the handsbreadth below the clavicle, so painfully interesting in the insidious commencement of consumption, is actually enlarged. It is spread out as if for better scrutiny. At a critical period you may magnify the most important point. For here is seen the slight shrinking or flattening, or the little depressions of surface and the accompanying loss of motion, denoting the first stage or the *infiltration* of tubercles. These appearances soon become more marked. As cavities at last form in the lung beneath, the hollows outside, from a sort of *caving in*, as it were, become deeper, and the stiffness of the walls more apparent.†

At first, as is well known, the two lungs are scarcely ever alike diseased. It is usually near the fatal close that both become so permeated by tubercles, and justify the statistics of the great work of Louis. ‡ One often remains healthy or nearly so for a long time. Hence we have the important advantage of accurate comparison. On closely inspecting the two lungs above, it is easy to perceive that a sculptor, copying accurately for a bust, would have to mould and chisel a shrunk, uneven surface over the diseased lung while the healthier one would be full, round and smooth. There is also less expansion or a sort of halting in the movement of breathing over the lung most affected.

---

* Recherches Cliniques sur l'Ausculation.

† The scientific physician will excuse a few familiar illustrations here and there, not necessary for *him*, and intended for the younger students of the profession. Several of these who have generously aided us in the experiments and measurements of this paper may be among its readers. They represent a large class preparing for very arduous struggles and duties. For these we venture to define with a little care some points too imperfectly sketched at hurried Cliniques.

‡ Recherches sur la Phthisic.

Lower down at the two sides there is secured by this plan what an artist might call a fine prospect of pleurisy. You can see every stage, from the first *hitch* in the gentle play of the ribs following the paralyzing stitch of the side involved, to the subsequent flattening of the intercostal spaces or the bulging from the effused fluid. For a rarity you may occasionally see the heart itself pushed to the right side of the sternum by hydraulic pressure—as in case No. 16 of our table—and slowly watch its gradual return as the waters subside. Lastly, you can note the invariable contraction of the side that follows the absorption and cure of empyema. With the arms thus thrown backward, the physician can readily pass the head under the axilla on either side and listen, percuss, or feel for the different signs of tubercles, pleurisy or pneumonia. It must not be forgotten, too, that in various parts of the chest the most skillful observers are occasionally puzzled with small aneurisms. It often needs almost the touch and ear of a blind man to feel their faint thrill, and hear their murmur and dullness. We not only emphasize these, but we thus get a fair field for sight. Drawing the skin, in this way, tightly against the ribs, either by a front or side view, you get a better glimpse of the least undulating tumor.

II. *Raising the shoulders and arms in the usual manner*, (fig. 2), *by locking the hands over the head, to examine the axillæ and spaces below them.*—This expedient is so customary in searching for tubercles, pneumonia and pleuritis in the localities mentioned, and its advantages are so well known that it is unnecessary to dwell upon them. It makes the ribs stand out more distinctly so as to mark well the intercostal spaces and show finely the indigitations of the serratus magnus with the external oblique muscle. It is mentioned in passing, merely to avoid a seeming omission.

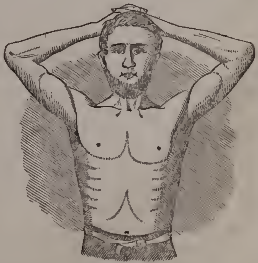


Fig. 2.

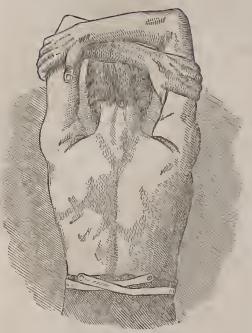


Fig. 3.

III. *Elevating the shoulders* (fig. 3) *by crossing and grasping the arms tightly behind the head so as to hoist the scapulæ to the highest point, and help uncover the lower part of the lungs at the back.*—To be candid, this showy figure has seemed the least useful of all. Yet a reference to the accompanying table of measurements, shows that by it we both separated and lifted the inferior angles of the scapulæ to the greatest possible distance. And on examining them as thus twisted round, on the living subject, it will be seen that by this means there is considerable thinning of the latissimus dorsi and lower part of the trapezius muscles. There is a triangular space, just at the base of the lung posteriorly, where it really aids us in diagnosis. We have tested this in a few cases of pneumonia and limited pleuritic effusion low down. In justice, then, it should be placed fairly on the list. Sometimes in recovery from larger effusions it has enabled us here to trace downwards feeble returning respiration, the slowly receding dullness, or the leathery friction sounds of the drying membranes. In a recent case of pleurisy of three days' duration (No. 12 of the table of cases)—with a sharp stitch in the left side, a pulse of eighty-four, firm, and a respiration of thirty-two, a furred tongue, and some stiffness of the shoulder—by this arrangement we decidedly emphasized a *grazing sound* from a spot the size of a dollar just above the diaphragm behind.

IV. *Depressing the shoulders* (fig. 4) *by bending forward, crossing arms, grasping at the loins, holding fast, and then unbending so as best to expose the apex of the lung behind.*—In a large number of the most perplexing cases of phthisis, where there are no clear signs at the top of the lung in front, they may be found at the back. But they require careful search. If we press the flexible ear into the little uneven hollow above the spine of the scapulæ, technically known as the supra-spinous fossa, or on the round inclined plane leading to it, and wait patiently till all is still, we shall often catch the harsh blowing, or fine fatty crackling of tubercles earlier than anywhere else. On this oblique irregular surface it is a little awkward to fit a

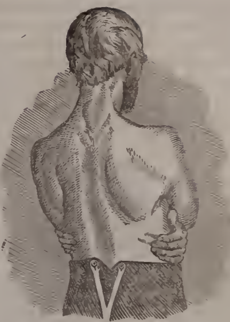


Fig. 4.

stethoscope. This important point has been noticed by that excellent authority in diagnosis, Dr. Walshe. Below this, is a favorite haunt of early tubercular deposits. They are apt to *burrow*, as it were, beneath the top of the shoulder. Small groups may sometimes be heard here *as if two little pieces of leather lay imbedded one above another in the top of the lung, besmeared with butter between, and creaked with a faint fatty sound to and fro with the breathing.*

It was early an object in these investigations, to improve our means of access to this too-much neglected spot. After many experiments in what a humorous friend calls "Bodily Contortions"—somewhat after the style of the statue of Laocoön—we hit upon the above, as the best. We wish it were better; yet, if it shall lead to more care here, it will not be in vain. The measurements of our table, prove that it slides downwards the shoulders more than any other process. The next position we shall mention, separates them as widely at the top, but fails in depressing them, and is also open to the objection of raising a fold of the trapezius along the edge of the lesser rhomboid, like that of a blanket towards the end, when stretched in the middle. This ridge on either side, meets in the centre, at the spinal column above, and forms an arch like the top of a gothic window. By the present process, however, it is leveled. Sliding off the irregular thick scapulæ in this way you flatten down the anterior edge of the trapezius, and all about the line of the levator anguli scapulæ, there is a smooth, comfortable bed for the ear. You are thus considerably nearer the very top of the lung. Of course the sounds are louder. At the highest point, we have recently detected in a small cavity, not otherwise perceptible, the delicate "cavernulous rhonchus" of M. Hirtz. There is a painful reminiscence connected with the time of our adoption of this little contrivance. It proved our imperfections, as well as its excellence. One after another, by a sort of fatality, in our notes of the cases of several young and promising patients, we were obliged to erase "bronchitis," "throat affections," and the like, and substitute the more ominous word "phthisis," till at last we fairly dreaded to apply the new test.

In taking leave of this point, it may be well to mention two rules of service in this posture:

First. Direct the patient, in crossing his arms, always to place the right or strongest arm outside, to hold on better. *Second.* In separating and fixing the shoulders, aid him by pushing or pressing them in the right direction with your hands, from behind.

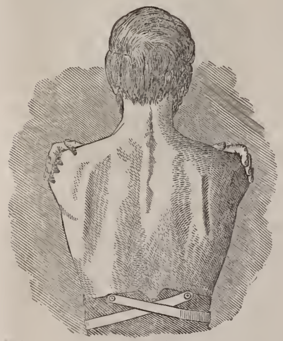


Fig. 5.

V. *Separating the shoulders to the utmost* (fig. 5), *by crossing arms, grasping the shoulder-joints, with the hands pulling strongly, and holding fast, to uncover the lungs behind.*

This is worth all our other suggestions put together. It would seem incredible that so simple an expedient should help us so much. On inspecting a muscular patient, it will be seen, that in the easy position, the trapezius and rhomboid muscles form two rather thick rolls of flesh between the spinal column and the scapulæ. They differ considerably in delicate or stout persons. You will find them thin and easily stretched in the slender clerk, and thick and resisting in the powerful cooper or blacksmith. By the above process, however, they are often flattened out like buckskin. And this is done by machinery, which, like the human hand, is of divine contrivance. The ribs are the fulcra, the shoulder-blades and arm-pits the jointed levers, the fore-arms and hands, the ropes, the cushion-like deltoids the pulleys, and the fingers the tenter-hooks, which slide off the shoulders, and stretch the muscles between them across the back, till, in slender subjects, they seem scarcely thicker than stout broadcloth.

In the above engraving, which is an exact portrait, the two lines of shadow actually form hollows at the edges, or the *inner boundaries* of the two severed scapulæ towards the spine. The subject possessed rather greater power of separating the shoulder-blades than usual, but not so great as some others. An approach to an average will be found by consulting the statement of measurements.

But you must try it on a patient to find its full convenience.

Instead of bony edges and bundles of flesh, there is a wide smooth bed for ear or instrument to range up and down the whole length of the scapulæ. One gets very close to ribs and lungs. The sounds are at once exaggerated. Even in health, and through ordinary clothing, you can readily detect the change. Any physician can easily test this matter. Let him seize the first obliging friend he may chance to meet quietly in his room. Let his learned head rest on the edge of the shoulder-blade awhile, and listen for the soft breezy sound of the breath within; and then shift the bone by the above process, and let his ear lay flat on the ribs in its place, and he will notice a material difference. It will be found that merely sliding away the bone and fleshy obstacles here, often seems nearly to double the respiratory murmur. It is like going from the faint breathing of diseased lung, to the loud "puerile," or, as Andral terms it, the "*supplementary*" respiration of the opposite healthy lung.* In this way there is opened a new and important field.

One object of this paper is, in chest examinations, to direct more general attention to the shoulders. The precautions sometimes incidentally mentioned, of bending forwards, loosely crossing the arms, and the like, though but half measures, are still useful. But even these are too often forgotten. A decided advantage of the new method is, that it increases behind the range both of palpation and percussion. In the former, the jar or "fremitus" of the voice and cough, more distinct over the denser lung, is thus made quite plain, on feeling carefully with the tips of the fingers, and shutting the eyes. Percussion here, it is true, sounds somewhat tympanitic from the tight stretching, but it is far better than the little or nothing by the old method. The *relative* dullness, too, is the same. And you soon become accustomed to the slight modification of sound. You will also thus get very distinctly the "sense of resistance" to the tapping fingers over the denser lung. Sometimes, by percussing carefully along the former bed of the scapulæ, we get slight dullness, even from small nests of tubercles. Of this we have seen many examples. In the case of a young man recently examined, there was only the least shrinking to the eye, and wavy and rude respiration to the ear, under the right clavicle in front; but on turning him round, throwing off his shoulders, and percussing gently with one finger, as for lobular pneumonia in a child, about the centre of the scapular bed, we could, by its dullness, bound a little nodule of tubercular deposit. There is an interesting case now under treatment. A printer, greatly emaciated, and sentenced to phthisis for many months previous to coming under our care, is rapidly regaining his flesh. He has half absorbed pleuritic effusion of the left side with an apparent anomaly along the edge of the left scapula above. It is a *tympanitic resonance* to the fingers, contrasting with the dullness just below, as described by those accurate observers Dr. Williams, M. Henri Roger, and Dr. Flint.* By thus uncapping the lungs behind, there is a special emphasis given to the vocal signs. In a case of pneumonia of the right lung, now convalescent, in Brooklyn, with the claret flush, quick breathing, rusty, sticky sputa, crepitant râle and dullness, we found that higher up and more plainly than usual; we could hear, by this means, the *ring* of "bronchial respiration" and "bronchophony," like the echo of *breathing or speaking in a wet barrel.*

---

* Clinique Médicale.

It is particularly convenient, too, in pleurisy, in finding the shaky voice or "egophony of Laennec, and thus determining the "line between wind and water." We have a case in point. In a patient with very large effusion in his right side, now slowly recovering, it has enabled us, for many days, more easily than ever before, to trace with a pencil this line of trembling voice as it has receded, with the subsiding fluid from the level of the spinous process, till it has gradually ceased near the inferior angle.

At the middle of that most affected, and partly covered by the scapula, we get the very best point for comparing the respiration of the two lungs. There can scarcely be the least fragment of tubercle above but it will roughen, obstruct, or deaden the breathing here.

We may be reminded, too, that before they are heard either in front or above, we get usually in this fruitful locality behind, the first *sibilant or mucous* râles of bronchitis. They commence in the smaller tubes. And here we must gently protest against the too sweeping destruction of the nice distinctions of Laennec by Skoda.† Yet we would not detract from the profound and original observations of one who has been termed by his admiring countrymen, the German Laennec. Different observers, like theologians, may believe in the same thing under different names. We admire the simple nomenclature of Latham, arranging the family of rhonchi into large, and small, "*crepitation.*" But we recognize as too useful to be forgotten the more general classification of the dry bronchial râles into sonorous and sibilant; and the moist into large mucous, mucous, submucous, and subcrepitant. With a little vivid imagination, too, we fancy we can guess at the *size* of the bubbles of the four last. They can be ranged as a sportsman would buck, duck, pigeon and snipe shot.

---

* *Archives Générales de Médecine; Physical Exploration*, etc.

† Abhandlung über Auskultation und Perkussion.

These better facilities for uncovering the finer tubes posteriorly, have enabled us to add to the various signs of bronchitis still another. It is a kind of *prolonged, loud, liquid breathing*, as if through a layer of wet sponge. We suppose it to be caused by a very slight increase of secretion, on the principle of the fresher notes from a wetted flute. It is heard either before or after the period of mucous râles, usually about the middle of the lung behind. We have ventured to call it *moist respiration.* We have found in a few cases that it has been useful in making slightly clearer a single sign of disease of the heart. It was discovered we believe by a talented pupil of Skoda, the lamented Zehetmayer, whom some of our Vienna friends, now our worthy professional neighbors, will well remember. We speak from memory, as his work is, for the moment, out of print.* He found that the murmur of mitral regurgitation, beyond any other sound of the heart, could be often heard quite through the left lung at the inferior angle of the scapula. Hence, this has become one of the recognized symptoms of this affection.

We close our remarks on this important position, by repeating the cautions given with the last. The right or stronger arm should be folded outside. You must carefully aid the patient to *adjust* the shoulders widely apart; for there is often an awkward kind of shrugging upwards at first. You must help by standing at his back, and pressing on them very firmly downwards with both your hands, so as to slide them over the larger swell of the ribs towards the middle of the chest. And then you may help fix them by passing your hands from behind to his arm-pits, and *pushing* with each thumb against the posterior edges of his spreading shoulder blades.

VI. *Dropping the arms motionless by the side* (fig. 6), *and breathing deeply, to show behind any stiffness of either shoulder, from disease of the lung, on "taking sight" across, or measuring with eye and fingers the vibrations both of the acromion processes and inferior angles.*

From a large number of observations, we have arrived at the general rule, that *on comparing the rise and fall of the shoulders behind, in strong breathing, there is loss of motion over the lung most diseased.* We think this merits the dignity of a new physical sign. That it has

---

* Die Herzkrankheiten.

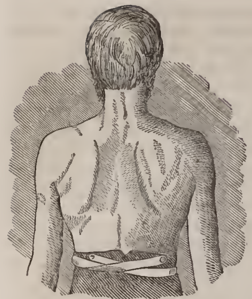


Fig. 6.

escaped the notice of so many eminent observers, has probably been from overlooking the necessary delicate tests. It seems very simple when once it is known. You have only to place the patient, with his back to you, a yard distant between you and a window, or white wall, and tell him to drop his arms by his sides, "as if they were dead," and breathe forcibly for a minute, "as if a little out of breath." By taking a range across the tops of the shoulders, like a rifleman, you readily detect the slightest difference as they vibrate up and down. There is another gauge. If you draw nearer, and let the eye rest on the tips of the shoulder blades below, or technically the "inferior angles," you will find that they gently play with the movement of full breathing, like the fins of a fish. There is still an elegant device in our aid here. If we separate the two index fingers, and let them rest lightly as pointers on these two angles, we shall make their gently gliding motion more apparent, and thus detect the least halt on either side, even through a lady's clothing as she sighs. The movement is not only seen, but *felt.* By a new application, palpation becomes the auxiliary of inspection. The sense of feeling, if rightly used, can also help our sight at the highest point above mentioned. We may imitate the delicate touch of the blind, by shutting our eyes as we lay the sensitive pulps of our fingers on the acromion processes, and feel even a shade of difference in the upward sighing swell of the shoulders.

The patient may possibly be a little awkward at first, and need a few moments' practice. In right-handed persons, too, as is well known, the whole favorite extremity excels the other slightly in size and strength. We have found that in health the right shoulder has usually a shade more of motion in violent respiration. And in accurately comparing, just as in measuring with the tape, the two sides, for bulging or contraction in pleurisy, we must make a little allowance on the right side for this natural excess.

Curiously enough, there is considerable variation in the relative stiffness of the top of the shoulder and the inferior angle of the scapula below, in different cases. In several instances, this has appeared to depend on the *location* of the disease. *It seemed to paralyze, as it were, the parts nearest.* If, for example, a small bed of tubercles was found at the extreme apex of the lung, the stiffness would be mostly *acromial;* but if they happened to be near the middle of the lung, it would be more angular. When the lesion was limited and very deep or low down, the shoulder would be but slightly or not at all affected. The loss of motion was considerably increased by duration. Recent cases of pneumonia made the least change. The greatest variation occurred in the progress of phthisis. Very slight tubercular infiltration would sometimes lessen to the watchful eye the upward rising of the shoulder, posteriorly; but as softening, cavities, contractions, and adhesions successively followed, the halt in its movement became more and more apparent.

Most of the physical signs, as Dr. Addison has ably shown, have occasional exceptions and anomalies.* But, especially in phthisis, we have found this as reliable as the majority. In our experience, it has been a much more constant symptom of this disease, than any other sign discovered within the last fifteen years—more uniform than the red margin of the gums, or "festooning," presented by that distinguished observer, Dr. Theophilus Thompson.† And, after all, it is only by the careful summing up of all the evidence, rational and physical, that we are justified in a conclusion.

In large pleuritic effusion, of considerable duration, there seemed the most powerful combination of agencies to fix and paralyze the shoulder. Here the stiffness was most complete.

Were it possible, with Dr. Hutchison's spirometer, to measure the "vital capacity" of both lungs *separately*, the loss would be on the diseased side. The passive shoulders rise and fall in strong breathing just like two weights hung on two pairs of bellows, moving together side by side. If one only is a little spoiled it will not inflate so much, and the weight upon it will not rise so high as the other. This motion, then, is mainly from the alternate filling and emptying of the lungs beneath. If bronchial tubes are obliterated, if tubercles, hepatization or effusion encroach upon the spongy lung, there must be less expansion upward. To this principal cause we may add auxiliaries. There are the stiffening of the walls from pleuritic adhesions; the partial paralysis of the thoracic muscles from the tenderness so often present; and, lastly, the increased weight of many morbid deposits.

We subjoin a table of cases in which the shoulders became thus fixed by disease, with some of the other symptoms.

---

* Guy's Hospital Reports.

† Lectures on Consumption.

A table of eighteen cases of Chest Diseases, in which Stiffness of the Shoulder on forcible breathing was seen from behind

No. Occup'tion and Age.	Disease and duration.	Some other Signs or Symptoms.	Lung most affected and probable Lesion.	Shoulder, Stiffness and Remarks.
1 Bookbinder 27	Phthisis 10 Months.	*Right lung: top, front* and rear, prolonged expiration. *Left lung: front,* for two inches below clavicle, depression, dullness and *fatty crackling. Rear top, fatty crackling,* with shoulders separated, vocal and tussive fremitus.	*Left lung,* softening, tubercles at apex.	*Left shoulder,* decided stiffness.
2 Tailor 37	Phthisis 2 yrs and 9 months.	*Right lung: healthy. Left lung: front, below clavicle,* depression, stiffness, dullness, *cracked metal sound,* cavernous respiration; *pectoriloquy, jar of voice* and cough. *Rear,* wavy respiration. * No. 4 gave more distinct cavernous respiration.	*Left lung,* cavity beneath c'ntre of clavicle	*Left shoulder,* decided stiffness.
3 Laborer 36	Phthisis 8 months.	*Left lung:* healthy. *Right lung: front, below clavicle,* stiffness, shrinking, dullness, prolonged respiration; *faint fatty crackling,* bronchophony, stronger vocal and tussive fremitus *Rear, faint fatty crackling.* Dullness with No. 5.	*Right lung,* softening, scattered tubercles at apex.	*Right shoulder,* slight stiffness.
4 Laborer 36	Pleurisy 5 weeks.	*Left lung:* healthy. *Right lung: side,* intercostal spaces flat; some bulging, decided *dullness* and resistance, friction sound at the nipple. *Rear,* dullness, friction sound at the inferior angle of scapula.	*Right lung,* receding effusion.	*Right shoulder,* decided stiffness, most at angle felt and seen.
5 Tailor 40	Phthisis 9 months.	*Left lung:* healthy. *Right lung: front, below clavicle,* stiff, hollowed, dull, resisting; *respiration* harsh, suppressed. *Back,* dull, with No. 5 *fatty crackling* extending to rear inferior angle; tussive fremitus.	*Right lung,* tubercles behind near the middle.	*Right shoulder,* slight acromial, decided angular stiffness.
6 Porter 27	Pleurisy 12 days.	*Tongue with white fur;* appetite poor; *pulse* 120; sharp, respiration 28; measurement, *right* 18 inches, *left* 17¾ inches (has had old left pleurisy). *Right lung:* healthy. *Left lung: front and side,* ribs stiff *below nipple,* flat, bulging, dull. *Egophony.*	*Left lung,* pleuritic effusion to nipple and inferior angle.	*Left shoulder,* stiffness more angularless acromial seen and *felt.*
7 Laborer 32	Phthisis 3 months.	*Right lung:* healthy; puerile respiration. *Left lung: front below clavicle,* stiff, shrunk, dull, resisting; respiration blowing; moist *fatty crackling. Rear,* some fatty crackling down to middle of lung.	*Left lung,* apex extensive softening, tubercules.	*Left shoulder,* decided stiffness, both acromial and angular.

No. Occup'tion and Age.	Disease and duration.	Some other Signs or Symptoms.	Lung most affected and probable Lesion.	Shoulder, Stiffness and Remarks.
8 Clerk 23	Chronic pleurisy empyema 21 months.	*Tongue* clean, appetite fair. *Pulse* 96; *respiration* 26. *Right lung:* healthy; puerile respiration. Measurement, *right* 16¾ inches, *left* 17 inches. *Left lung: front and side* flat, bulging, stiff, dull, resisting; abscess from former operation. *Rear, low down*, flat, dull.	*Left lung*, pleuritic effusion to nipple and inferior angle.	*Left shoulder*, very decided general stiffness, seen and felt.
9 Clerk 20	Phthisis 3 months.	*Left lung:* nearly healthy; only slight bronchial sibilus. *Right lung: front below clavicle*, dull, resisting, bronchophony; faint *fatty crackling* to 3 inches below; vocal and tussive fremitus. *Back*, apex dull, fatty crackling, fremitus.	*Right lung*, softening tubercles 3 inches down.	*Left shoulder*, decided stiffness, more acronical, seen and felt.
10 Erand-boy 15	Phthisis 3 years.	*Right lung:* healthy; puerile respiration. *Left lung: front, below clavicle*, stiff, shrunk, dull, resisting; *fatty crackling* for 2 inches down; bronchophony; *heart* sounds transmitted; vocal and tussive fremitus. *Rear top*, dull, fatty crackling.	*Left lung*, softening tubercles 2 inches down.	*Left shoulder*, slight stiffness, more acromial, seen and felt.
11 Cooper 19	Phthisis 2 years.	*Right lung:* nearly healthy, wavy respiration. *Left lung: front top*, slight depression and dullness, jerking respiration; faint, *fatty* crackling for 2 inches below clavicle. *Rear*, faint crackling above.	*Left lung*, softening tubercles lowest behind.	*Left shoulder*, quite stiffened seen and felt.
12 Peddler 24	Pleurisy 3 days.	*Pulse* 84; firm respiration 32; tongue whitish. *Right lung*, healthy. *Left lung:* stitch in side. *Rear*, shade of dullness, bronchophony, *grazing sound* the size of a dollar at base.	*Left lung*, roughening membrane, "Dry pleurisy" behind	*Left shoulder* stiffness slight, most angular, seen and felt.
13 Boat builder 38	Pneumonia 4 days.	*Face* dusky, claret-flush; *tongue* whitish fur; *urine* small, high colored; *pulse* 116, full; *respiration* 32; *sputa* rusty, tenacious; cough severe; pain at right nipple. *Left lung:* healthy. *Right lung: front, base dull, resisting. Rear* middle, bronchophony, bronchial breathing, *crepitant râle; base* dull.	*Right lung*, hepatization.	*Right shoulder*, slight stiffness.
14 Laborer 25	Pleuro-pneumonia 3 weeks.	*Pulse* 90; full; *respiration* 28; *sputa* viscid, whitish, tongue cleaning. *Left lung:* healthy; free puerile respiration. *Right lung: side* stiff, less furrowed; respiration absent. bronchophony, dullness, resistance, *Rear:* base dull, *sub mucous râles.*	*Right lung*, pneumonic hepatization, some effusion.	*Right shoulder*, moderate stiffness
15 Widow 40	Phthisis 17 months.	*Left lung:* healthy, *puerile respiration. Right lung: front*, below clavicle for 2 inches, *shrinking, hollowing* stiffness, dullness, resistance, moist *fatty crackling*, bronchophony, vocal and tussive fremitus. *Rear*, from apex to inferior angle slight dullness (No. 4) fatty crackling fremitus.	*Right lung*, softening tubercles at apex, farthest down behind.	*Right shoulder*, decided stiffness both seen and felt, both acromial and angular.

No. Occup'tion and Age.	Disease and duration.	Some other Signs or Symptoms.	Lung most affected and probable Lesion.	Shoulder Stiffness and Remarks.
16 Policeman	Empyema uncertain.	*Pulse* 116; *respiration* 32; *tongue* clean; measurement: right, 17 inhes, left, 18 inches. *Right lung:* healthy, puerile respiration. *Left lung:* roundly bulging at left nipple; *side* flattened intercostals, stiffness, complete dullness of whole lung; respiration silent; *heart pushed* to right of sternum, near the nipple.	*Left lung*, very large, pleuritic effusion.	*Left shoulder*, complete stiffness, acromial and angular.
17 Peddler 29	Phthisis 18 mouths.	*Right lung:* healthy. *Left lung: front, below clavicle* for 2 inches, shrinking, flattening, slight dullness, resistance; *fatty crackling*, tussive fremitus; voice whispering, broken, coarse. *Rear*, harsh respiration, wavy, weak below.	*Left lung*, small softening tubercles high up.	*Left shoulder*, decided stiffness, more acromial, seen seen and felt.
18 Unmarried 21	Phthisis 7 months.	*Right lung:* nearly healthy, respiration rather *rude*. *Left lung: front, below clavicle*, flat, shrunk, hollow near centre, quite stiff; distinct *cracked metal sound*; dull around, resistant; *amphoric respiration; pectoriloquy, fatty crackling around cavity, heart sounds transmitted. Rear, top*, faint *crackling*; wavy respiration dull, fremitus.	*Left lung*, cavity beneath centre of clavicle.	*Left shoulder*. marked stiffness, more acromial, felt and seen.

It will be perceived that in this table it was not deemed essential to crowd in all the particulars. Only in a few more acute cases, for instance, were the "rational signs" given.

From our rejecting a list of earlier cases, in which we had not noticed specially the features of "acromial" or "angular" stiffness, there is an accidental predominance of males. Only two cases, No. 15 and No. 18, were females. This happened from the fact, that our service on the male side of the house, in "diseases of the chest," in our largest Dispensary in the city, afforded a more ready supply from this class. It rather does injustice to the sign itself. For we have long observed that stiffness of the shoulder, from diseases of the lung beneath, is more readily detected, and is less apt to be disturbed by powerful muscular action in females and delicate males than in the more robust. The patients happened to be all right-handed.

This table might be indefinitely extended. For, with care, the sign may be found, perhaps, in ninety-five out of a hundred cases of phthisis, pleurisy, and pneumonia. In bronchitis, involving pretty equally both lungs, we would not, of course, expect to find a feature which depends entirely on the principle of the comparison of a diseased with a more healthy lung. Those who have not the leisure to study the whole, will catch its most interesting points by running the eye over the two last columns.

We have a few more statistics. Whenever it can be fairly done, even in a slight degree, it seems desirable to bring the calm certainty of mathematics to the aid of medicine. Without teasing the reader with too long an array of figures, we may here give some measurements of ten male subjects, mainly illustrating positions Nos. 3, 4, and 5. In a matter not of vital importance, it did not seem right to trespass on the kindness of sensitive females. Yet, to make the calculations approach more nearly to the uniform standard for both sexes, a class of males rather below the ordinary size was selected. There was considerable variation in the distance which individuals alike in figure could separate the shoulders.

Of course, this statement is only a fair approximation. A little stretching, more or less, by other observers might slightly increase or diminish these numbers. And if great accuracy were really required, a much larger table of both sexes would be necessary.

STATEMENT OF AVERAGE DISTANCES BETWEEN CERTAIN POINTS OF THE BACK IN TEN MALES, RANGING AT ABOUT FIVE FEET EIGHT INCHES IN HEIGHT.

Transversely between the superior angles of the scapula.—Position No. 5, or widely separated, 7.38 inches; No. 6, or "easy," 5.19 inches; gain 2.19 inches; No. 4, or with shoulders depressed, 6.77 inches; gain by No. 5, 0.61.

Transversely between the inferior angles of the scapula.—No. 5, or widely separated, 8.91 inches; No. 6, or "easy," 6.01 inches; gain 2.90 inches.

Obliquely from the vertebra prominens of the neck to the superior angle of the scapula.—No. 4, or "depressed" position, 4.53 inches; No. 6, or "easy," 3.67 inches; gain 0.86 inches.

Obliquely from the spinous process of the lowest lumbar vertebra to the inferior angle of the scapula.—No. 3, or high elevation of shoulders, 12.04; No. 6, or "easy," 10.34; gain, 1.70 inches.

Decided as the advantage of these various stretching processes is thus proved to be in theory, the above figures hardly do justice to the matter in practice. It requires actual experiment. The advantage between placing the ear or instrument on a round, thick muscle an inch wide, and a flat thin one, of two inches wide, can hardly be measured by a mere mathematician so well as by a physician.

In conclusion, to the professional friends who have publicly or privately, doubtless in good faith, questioned the *originality* of these plans, we have with equal courtesy, just a word of reply. When they will point to the passages fairly describing them, possibly overlooked in our review, we will gladly make honorable restitution. The "second position" was admitted to be common from the first. In adopting all the rest, we must still believe we have been copying no other physician. We have searched for them in vain, in all the authorities within our reach, down to one of the most recent, that of Wintrich, in the excellent series of Virchow.*

But the question of their origin is really insignificant, compared with that of their *usefulness.* Here we have tried them too faithfully to be mistaken.

The most reliable of all the physical signs in "exclusion," and the most certain proof of healthy lungs, is a *pure symmetrical* RESPIRATORY *murmur* heard throughout their entire texture. Even in the most hurried examinations, there are four points alone where this welcome, soft, breezy sound—neither too faint nor too harsh—can usually decide the question. On these we instinctively first place our ears. In lectures to students, we have informally described them by a highly figurative expression convenient to remember, as the "Four corners of the chest." They are the handsbreadth *below* the two clavicles on each side in front; and the same spaces *above* the inferior angles of the two scapula behind. On carefully experimenting with the new "positions," here recommended, it will be found that they aid us most in these important localities.

Again, from infancy to old age, the unfavorable result of measles, small pox, and typhus, and other fevers, is very often decided by the occurrence of pulmonary inflammations. Adding these complications to the formidable list of diseases of the chest already described, it seems probable that the simple facilities here offered, may throw more or less light upon *one-third of the fatal maladies around us.*

The most destructive of all these is consumption. It more than decimates, in their prime, all ranks and conditions. The sweetest consolation of these labors, is the thought that they may be most useful in warning us earlier of this most stealthy of diseases. Our dearest hopes centre here. Its terrible importance may excuse our repeating an oft-told tale. It may serve the younger students of the profession; and even with the most intelligent practitioner, the strongest point in the argument rests upon the familiar facts we are about to mention.

---

* Krankheiten der Respirations Organe.

Grave physicians themselves sometimes see only the darker side of this question. They look placid before patients, but tell us in confidence we can do nothing but soothe. Those "new lights," the "physical signs," they say, are often fallacious. And finally, they ask despondingly: "Of what use is nice diagnosis or curative treatment, when the disease is so surely fatal?"

One by one, let us briefly weigh these questions. Human life, in medicine as in law, demands that we shall fairly sum up the evidence. We hope to prove that here, as elsewhere, "knowledge is power." Let us suppose that before you, on trial, is a suspected consumptive. On scanning your subject, from one to many well-known marks may be wanting. But there may be either a slender form with a narrow chest or features, ashy, pale and homely, or perchance chiselled and colored, as in waxen beauty; lustrous eyes, with long lashes; hair silken or dry, and generally thin; teeth white and frail, and possibly festooned with a red line at the gums; long lean fingers, with nails hooked forward; or occasionally a neck seamed with the scars of scrofulous childhood. *All these, in nature's language, mean simply a feeble organization.* And this, we know, may be either inherited or acquired. Many or few near relatives may have died in the same way. But the records of the Brompton Hospital cheer us with the proofs that the share of family taint in the mischief is not so great as some have dreamed.* Only the weakest lambs even of a delicate flock are commonly taken. Hospital statistics tell us, too, that the males even of these consumptive families, by freer exercise in the open air, have two chances to escape, to one of sedentary females.

But more frequently a frail, or even a good constitution, is lowered to the level of consumption by depressing influences. For the sake of a coming argument, let us study these. Now and then a complaining or dissipated subject has inhaled the insoluble dust of the knife-grinder, the stone-cutter, or the blacksmith, till weak lungs can bear it no longer. But more commonly the rich have grown dyspeptic, and the poor have starved. The hard student has overworked his brain to rob his stomach; the merchant, in his early struggles, has devoted ten minutes to dinner, or forgotten it; or a thin, nervous bookkeeper has for years narcotized digestion with *tobacco.* Some journeyman tailor has spent weeks of fasting, nights sitting like a Turk on his board; or an ambitious clerk, from a home of plenty in the country, has come to pine on a slender salary in a city warehouse, till, like the caged monkeys of Paris, he emaciates with tubercles. Or, like a gentle departed spirit we once knew, a rigid vegetarian, forgetting his mother's milk, his own canine teeth, and the great fact that the race in mercy pass through "*omnivorous*," from the pole to the equator—has actually wilted, like a plant, with the strange fancy, that eating flesh is the "root of all evil."

---

* Eighteen per cent. of the males, and thirty-six per cent. of the females reported consumptive parents.—*Report of* 1849.

"Extremes meet." A fine lady in a splendid mansion, who neither "toils" nor "spins," but lives largely by gaslight, loses her relish, and wastes away suspiciously; while a poor widow, weakened by watching the sick departed, in a neighboring garret, at the same midnight hour, is silently acting the "song of the shirt," with a "hacking" accompaniment, till hunger is drowned in grief. Imprisonment, and sorrow, and want together tell fearfully. Early and late, in all weathers, a slender orphan girl, gliding past like a dark spectre, bashfully veiled, and too virtuous to sell soul and body for more, thus toiling for the barest decencies of better days, has lived on *bread and tea*, till a hollow cough tells she will soon enter the close, dusty work-shop no more forever.

In a word, on careful study we discover that in all its various forms, the prevailing cause of consumption *is depraved nutrition.* It is from poor chyle, converted into impoverished blood, that *within* the meshes of the lungs, according to Laennec, or *on them*, by the theory of Carswell, we have deposited the fatal sediment of tubercles. And this bad nourishment, again, may from an inherited weak frame, poor food, or no stomach to eat it, prostration from *foul or dusty air*, grief or mental depression, excessive study in active confinement, or few or many of the agencies pictured above. In the name of the physic of two thousand years, can we not do something to arrest these? We can. From the "marks" enumerated and the family history, we can often fortify hereditary consumptives long in advance, and ward off threatened attacks. But, with the predisposed and all others, at the first warning, the spitting of blood, tickling cough, wasting or faint "physical signs," we must promptly reform all these abuses. It is time to bring up all our forces. Thousands thus sin against the laws of health unconsciously. *Especially will they deny a feeble appetite or trashy diet.* All the antecedents must be known, and the whole life regulated.

Dust, foul air, killing study, pining grief, domestic imprisonment, bolting, tobacco, and starvation must in mercy be promptly forbidden. The two great elements to be secured are, *generous food and fresh air.* We must get of these all we can. It must be frankly stated, that life itself may depend on good dinners, and time to eat them. At any sacrifice in other things, these should comprise, if possible, as staples;—fresh beef and mutton, as variations;—poultry, game, and other digestible delicacies, either to be followed by farinacious articles, rich milk or *cream*, and ripe fruits instead of pastry as dessert. The best caterer is here usually the best physician. In this fearful malady, eating may often be aided by taking, for the "stomach's sake," those questionable luxuries in health, the purest ales and wines. But, to borrow the colloquial phrase of a friend, the greatest "*appetizer*" of all, is regular *exercise in the open air.* Yet consumptives are very sensitive to sudden changes. All must be clothed in flannels next the skin, and well shod. We must prescribe even for fine ladies high rubber boots, and umbrellas for damp days; tell them to keep dry, not to go out fasting, or remain chilled, and they may gradually defy three-fourths of the weather.

With plenty of bed-clothes, even the distant sash of a close bed-room may be lowered, half an inch at night. With the poor, or with most persons in crowded, paved cities, daily walks, lengthened with increasing strength, are an excellent substitute for riding on horseback, so serviceable in this affection. Remarkable recoveries occasionally follow sudden reforms. Pale clerks, coughing and wasting, sometimes leave St. Louis and western cities, to sleep out on the prairies, finally to hunt buffaloes, and fatten on them, and return quite restored. Nearly two hundred years ago the great Sydenham wrote quaintly: "But of all the remedies for phthisis, long and continued journeys on horseback bear the bell." And it is mainly for their facilities for winter exercise, rather than anything specific in warm air, that we prize for these tender invalids the sunny deck, on a tropical sea voyage, the balmy shores of the milder West Indies, or the perfumed pineries of Florida. But more than we dream can be accomplished at home. Consumptive stonecutters or blacksmiths must be told, if they continue the business they will surely die. Dr. Beddoes, in the last century, wrote a book to prove, that butchers, rising early, living well, and keeping with their merchandise in cool, pure air, were remarkably exempt from this disease, and he was right. Young persons frequently can change to more healthy callings. But with the poor we must often kindly compromise. The slavish clerk or student may compensate for confinement, by better living and longer walks night and morning.

Wonderful sacrifices will sometimes be made by patients for a frank, honest medical adviser, and for precious life. We knew a physician who wrote on the fly-leaf of his "diary" as a motto: "With the blessing of Providence, I can always afford to do right." He said it cost much study, toil, and charity, and withheld all medicines he would not take himself; but brought in return, sweet sleep and a quiet conscience, and slowly but surely, a competence. When he was young and poor, he once said to a rich lady with a train of carriages: "Ride only in rainy weather, and average a certain number of miles in a day in walking on foot, or I cannot attend you." He lived to get a present above his fees, and she lived to thank him years afterwards. We commend the deep moral of this story to all who treat consumptives. The great temptation, is to *medicate* with opiates and nauseating cough mixtures, till the feeble stomach is spoiled, and *manage* with powerful natural agencies too little. Yet we would not disparage the valuable aid of iron, delicate bitters, or the hypophosphites as tonics or correctives, or the local application of the solution of the nitrate of silver for the occasional laryngeal complications. Especially from a faithful trial of years, do we prize cod-liver oil, which, by a law in animal chemistry, seems to supply at the critical moment a needful element in the defective nutrition.*

These remedies are all well known to the profession. Our object has been, from this rapid survey of the ground, to show a prevailing deficiency in management rather than medication. And we close this point by an appeal to those medical friends who "never succeed," whether with an energy and perseverance equal to the fearful crisis, they have searched out these causes, and enlisted all these auxiliaries?

Our space allows but a few words to the rapidly diminishing skeptics in diagnosis. Even the most ancient never question the rational signs. They doubt not, as characteristics, the cough first dry and tickling, then moist or hollow; with sputa ranging from scanty and pearly, to abundant round yellow or greyish masses, floating in clear frothy mucus; or the hæmoptysis, now but a stain, and then deluging the sufferer with blood. Nor do they deny the wandering, pectoral pains and dyspnœa; enchanting night sweats; a teasing diarrhœa towards the last; and the quick evening pulse at the commencement, running gradually into the well known hectic fever, with first but a delicate blush, which, near the close of the scene, brightens like a spot of rouge on a haggard face, reminding you of the poet's strange fancy on the lips of a vain dying woman:

---

* The reader is referred for medical, and other strong testimony in favor of this agent, to the reports and various contributions from the Brompton Hospital, for consumption, and to the works of Drs. Hughes Bennett, Walshe, Blakiston, Wood of Philadelphia, and others.

> "And Betty give this cheek a little red."

The honest physician, equally with the faithful advocate, dares not neglect any available witnesses, in a trial for life. All must be questioned. But the physical signs as they are called, are, in fact, the most reliable of the two classes, for they depend not on mere functional derangements, nor on the varying sympathies of other organs, but upon actual changes in the structure of the lungs themselves. The post mortem explains them all.

As the chest is opened, the pleuritic adhesions and comparative collapse at the top of the lung most diseased, throw light on the stiffness, shrinking, and hollowing seen outside long before on "inspection." And then the lung, like a church organ, changes its music with every alteration inside. A fragment, with fine scattered tubercles, demonstrates how the first crowding or obstructing of the small tubes may produce "prolonged expiration," or wavy, harsh or suppressed breathing. Light spongy lung, injected with solid matter, naturally becomes more heavy, and a *better conductor* of sound. Hence, as we cut into a denser portion, thickly studded with grey or yellow tubercles, we can understand why, in life, they caused "dullness," and a sense of resistance on percussion, and why they communicated a more intense thrill of the voice of "bronchophony" to the ear, and of "fremitus" of the cough and voice to the fingers. Irregular masses of softening cheesy tubercles here and there produced the "fatty crackling." A cavity from which these same tubercles have been expelled, was a regular music box. Half filled with fluid, it caused "gurgling;" nearly or quite empty, it gave the blowing "amphoric," or less musical "cavernous" respiration; reverberating little drops or bubbles, it produced "metallic tinkling;" when its walls were struck with the mouth open, it emitted a "cracked metal;" sound, and lastly, when, with a neighboring bronchus, it formed a *speaking tube* of lung, it conveyed to the listening ear the shrill piping voice of pectoriloquy. The veriest skeptic can scarcely resist this simple lesson by nature herself in the philosophy of these sounds.

Finally, to the "*fatalists*," who believe that all must die in phthisis, and that diagnosis and treatment avail but little, we may say a word of the changes of thirty years. Men no longer innocently cage and kill consumptives. From the crotchet of inflammation and its bleeding, antimony, and digitalis, we have gradually veered to fresh beef, fresh air, and cod-liver oil.

Again, the "cretefaction" of Rokitansky, or drying up of tubercles to shreds of chalk, amid the puckerings and scars of extinct tuberculous cavities, is discovered to be quite common in the aged. Of those ranging about seventy years, Messrs. Rogée and Boudet found that these chalky concretions occurred among the inmates at Salpétrière in one-half. Dr. Hughes Bennett having instituted a similar series of observations in Edinburgh, estimated the proportion in those dying above forty, as from one-third to one-half. This is hopeful. The last author, in his recent lectures, gave a drawing of one of these cicatrized cavities in a man aged 55, who died of delirium tremens, and who, by generous living, had recovered from an attack of phthisis many years previous. Though death is still the sad rule, in ordinary cases, yet these exceptional cases are more and more frequently reported. Our facts may live when our theories perish. We present here the briefest synopsis of four illustrative cases, from among several less marked. They show the importance of that decision and *thoroughness* for which we have contended.

Case 1.—*Tubercular infiltration—Recovery—Well* 8 *years after.*—Miss ——, of New York, aged fifteen, very slender, *the only child out of five, not dead of consumption*, having coughed, and lost flesh for several weeks, consulted us in October, 1850, in great alarm. She had a bright, sunken eye, some fever at evening, pulse 120, and a dry, teasing cough. Beneath her right clavicle were slight hollowing, moderate dullness and resistance, harsh respiration, prolonged expiration and bronchophony. She was ordered to be well aired and protected walking and sleeping; to be *educated to walk several miles a day*, to take cod-liver oil and iron, and to live most generously. Her circumstances being easy, these directions were obeyed to the letter. In three months she was discharged greatly improved. At the time of writing, eight years after, she is reported in excellent health, having married, and become the mother of two children.

Case 2.—*Tubercular infiltration—Some throat symptoms —Well nearly three years after.*—Miss ——, of New York, aged twenty-two, a delicate blonde, rather anemic, of healthy parents, applied to us in June, 1856, with a red, granular throat, tickling cough, and loss of flesh. Gradually there were developed a little later, beneath the right clavicle, stiffness, hollowing, some dullness, prolonged expiration, harsh breathing, bronchophony, and distinct vocal and tussive thrill. She was liberally supplied with everything needed. Iron, nux vomica, ale, cod-liver oil, nitrate of silver, and astringent gargles to the throat, long walks and the best living having failed to relieve, she sailed in January for Enterprise, in the interior of Florida. She was a model patient, exercising and eating to her utmost, and bravely obeying orders. Long rubber boots, long rides and lively sports were practised to perfection. She soon forgot her cough in merry laughs, on the lake, and in the pine woods. Returning north in June, quite restored, she soon after married. She is now the mother of an uncommonly vigorous child, is free from cough, and enjoys better health than for years previous.

Case 3.—Softening—Cavity—Hæmoptysis—Well nine years after.—Charlotte ——, aged eighteen, blonde, very frail looking, having just lost her father with phthisis, consulted us from Brooklyn, in February, 1850, for cough, spitting of blood, hectic, and night sweats. On examining the chest, we found distinct "fatty crackling," and other signs of softening tubercles, from a spot the size of a dollar just beneath the centre of the left scapula behind. She was ordered to change her poor living at once, to take, regularly, long walks, with iron, a few drops of tincture of nux vomica for her delicate stomach, and cod-liver oil. In a few weeks, just at the centre of the bed of tubercles, there came the cavernous breathing, and pectoriloquy of a cavity. Changing her diet to the richest food, she soon gained in flesh, and all the symptoms. She married eighteen months after. On careful examination, but a few days before writing this, there was not the crackle of a tubercle in either lung, only a little smooth blowing sound behind, over the old cavity. She was comparatively fleshy, and said she "was never so well."

Case 4.—Cavity—"Pectoriloquy"—Hæmoptysis—Well eleven years after.—Dr. ——, aged about thirty years, pale, emaciated, and coughing—sometimes blood—was commiserated by our American friends in London, early in 1848, as fast sinking in consumption. While practising in a city near New York a suspicious cough had attracted his attention, and Dr. Watson, now the worthy president of "our Academy," had found "pectoriloquy" and a "cavity" in his lung. Drs. Swett and Clark had confirmed this. Rallying from despair, he had embarked for London, where we met him. He was still an enthusiastic student, and we could hear him cough, and see his haggard face at every hospital and medical gathering. Subsequently, he saw that eminent chest-physician, Dr. Stokes, of Dublin, who agreed with the former opinions, and urged him to keep innocently cage and kill consumptives. From the crotchet of inflammation and its bleeding, antimony, and digitalis, we have gradually veered to fresh beef, fresh air, and cod-liver oil.

Again, the "cretefaction" of Rokitansky, or drying up of tubercles to shreds of chalk, amid the puckerings and scars of extinct tuberculous cavities, is discovered to be quite common in the aged. Of those ranging about seventy years, Messrs. Rogée and Boudet found that these chalky concretions occurred among the inmates at Salpêtrière in one-half. Dr. Hughes Bennett having instituted a similar series of observations in Edinburgh, estimated the proportion in those dying above forty, as from one-third to one-half. This is hopeful. The last author, in his recent lectures, gave a drawing of one of these cicatrized cavities in a man aged 55, who died of delirium tremens, and who, by generous living, had recovered from an attack of phthisis many years previous. Though death is still the sad rule, in ordinary cases, yet these exceptional cases are more and more frequently reported. Our facts may live when our theories perish. We present here the briefest synopsis of four illustrative cases, from among several less marked. They show the importance of that decision and *thoroughness* for which we have contended.

Case 1.—*Tubercular infiltration—Recovery—Well* 8 *years after.*—Miss ——, of New York, aged fifteen, very slender, *the only child out of five, not dead of consumption*, having coughed, and lost flesh for several weeks, consulted us in October, 1850, in great alarm. She had a bright, sunken eye, some fever at evening, pulse 120, and a dry, teasing cough. Beneath her right clavicle were slight hollowing, moderate dullness and resistance, harsh respiration, prolonged expiration and bronchophony. She was ordered to be well aired and protected walking and sleeping; to be *educated to walk several miles a day*, to take cod-liver oil and iron, and to live most generously. Her circumstances being easy, these directions were obeyed to the letter. In three months she was discharged greatly improved. At the time of writing, eight years after, she is reported in excellent health, having married, and become the mother of two children.

Case 2.—*Tubercular infiltration—Some throat symptoms—Well nearly three years after.*—Miss ——, of New York, aged twenty-two, a delicate blonde, rather anemic, of healthy parents, applied to us in June, 1856, with a red, granular throat, tickling cough, and loss of flesh. Gradually there were developed a little later, beneath the right clavicle, stiffness, hollowing, some dullness, prolonged expiration, harsh breathing, bronchophony, and distinct vocal and tussive thrill. She was liberally supplied with everything needed. Iron, nux vomica, ale, cod-liver oil, nitrate of silver, and astringent gargles to the throat, long walks and the best living having failed to relieve, she sailed in January for Enterprise, in the interior of Florida. She was a model patient, exercising and eating to her utmost, and bravely obeying orders. Long rubber boots, long rides and lively sports were practised to perfection. She soon forgot her cough in merry laughs, on the lake, and in the pine woods. Returning north in June, quite restored, she soon after married. She is now the mother of an uncommonly vigorous child, is free from cough, and enjoys better health than for years previous.

Case 3.—Softening—Cavity—Hæmoptysis—Well nine years after.—Charlotte ——, aged eighteen, blonde, very frail looking, having just lost her father with phthisis, consulted us from Brooklyn, in February, 1850, for cough, spitting of blood, hectic, and night sweats. On examining the chest, we found distinct "fatty crackling," and other signs of softening tubercles, from a spot the size of a dollar just beneath the centre of the left scapula behind. She was ordered to change her poor living at once, to take, regularly, long walks, with iron, a few drops of tincture of nux vomica for her delicate stomach, and cod-liver oil. In a few weeks, just at the centre of the bed of tubercles, there came the cavernous breathing, and pectoriloquy of a cavity. Changing her diet to the richest food, she soon gained in flesh, and all the symptoms. She married eighteen months after. On careful examination, but a few days before writing this, there was not the crackle of a tubercle in either lung, only a little smooth blowing sound behind, over the old cavity. She was comparatively fleshy, and said she "was never so well."

Case 4.—Cavity—"Pectoriloquy"—Hæmoptysis—Well eleven years after.—Dr. ——, aged about thirty years, pale, emaciated, and coughing—sometimes blood—was commiserated by our American friends in London, early in 1848, as fast sinking in consumption. While practising in a city near New York a suspicious cough had attracted his attention, and Dr. Watson, now the worthy president of "our Academy," had found "pectoriloquy" and a "cavity" in his lung. Drs. Swett and Clark had confirmed this. Rallying from despair, he had embarked for London, where we met him. He was still an enthusiastic student, and we could hear him cough, and see his haggard face at every hospital and medical gathering. Subsequently, he saw that eminent chest-physician, Dr. Stokes, of Dublin, who agreed with the former opinions, and urged him to keep on the sea for a time, and live on the choicest beef and mutton, and drink the best porter. He thus voyaged across the Atlantic for several years, lost his cough, and grew very stout and ruddy. He is now perfectly well, and is a distinguished professor in the West. We are sure his kind heart will excuse this instructive history for the good of others.

And this seeming excursion, and these cases bring us back with a redoubled force to the keystone of our arch, the great question of this paper. If we can thus constantly recognize both the *causes* and *symptoms* of phthisis—if, by improved *treatment*, it is occasionally cured,—*how much greater success might we attain, if, by this system of "management of the shoulders," or any other means, we could average, say, three months earlier notice?* Time only can tell. We call for volunteers in this search. As a parting request, we ask each physician who reads this, faithfully to examine by its plans, at least THREE FAIR CASES, and further, to help in devising something better. The field of "diseases of the chest" is large enough for all who will aid in its cultivation. To its able representatives in our three medical colleges, and others, we feel indebted either for friendly offices, or the example of untiring zeal.

Calm and even mathematical as this discussion has been, we approach its last words with unfeigned emotion. Deducting young children, how fatal still is phthisis! From eighteen to thirty-five, says Hippocrates; from twenty-five to thirty-five, says Brompton Hospital—just the seed time of useful life—is its sad harvest. No malady so pinches the poor. None brings the pawnbroker so many warm garments from shivering woman, or fills his drawers with so many wedding rings, to buy the last delicacies to sustain lingering life. It is full of bitter memories to the physician. For it tells him of imploring looks answered by forced smiles with a heavy heart; of arms folded in despair, and blasted hopes. Perchance, as with us, it has struck down the noblest of kindred or friends. For it chooses the brightest and best, the gentlest lambs of every flock. And the lessons of triumphant faith, the smiles on pallid lips, the dying counsels, and looks of love they gave, made us but miss them the more. For they who are most ready to die are most worthy to live.

Deeply have we longed to throw a single ray across this gloomy path. It will be for our brethren to say if we have succeeded. We close, by assuring them of our sincere conviction based on extended trial, that these simple expedients of *thinning*, *condensing*, and *stretching* the walls of the chest, as described, *add fully one-third to our means of detecting the earliest signs of consumption.*

SUMMARY.

1. That remembering the great value of many reputed "little things," in the science of saving life; and that the chests of *lean* persons give clearest sounds, and are best marked—we may seize this hint from nature, and increase the "physical signs," by either lessening or removing more especially those principal natural obstacles, the great pectorals in front, and the two scapulæ and their muscles behind.

2. This may be affected by using the arms as levers, and the hands as hooks to pull. The process, in each case, involves three principles—*thinning*, *condensing*, and *tightening*. It is illustrated by the simple experiment of placing one forearm of a muscular man behind his back, while the other hangs loosely by his side, when the sound, especially of percussion, will be found heightened below the clavicle of the stretched side in front.

3. That the suggestions here offered are not fanciful theories, but the results of practical observations on several hundred patients in private, and in two large Dispensaries, during the past year. The drawings, too, were copied from nature. To throw back the shoulders, and bare the whole front, we need the "*first position.*" It is a repetition of the above experiment with *both* arms. *The left wrist is simply held easily with the right hand behind the loins.* This has many little advantages in obscure cases. It gives symmetry, gets rid of the arms, and fits the coat of flesh closely, like a bandage, for "inspection," makes it tense to increase the resonance of delicate percussion, and *conducts* better the sounds within. It thus aids in distinguishing the more difficult cases of tubercles, pleurisy, pneumonia, or aneurism.

4. That the "second position" is the common one of locking the hands over the head to examine the axillæ, and is mentioned to avoid omission. The *third position* crosses the arms at the back of the head, with the hands grasping near the elbows, so as to *hoist* the shoulder blades high up behind, and *thin* the muscles, to search for obscure or limited pleurisy or pneumonia low down near the diaphragm posteriorly.

5. It is very important early in suspicious cases of cough, to examine carefully the *tops of the lungs behind.* For without any distinct signs in front, consumption, often thus mistaken for a mere throat affection, begins here. A few scattered tubercles are apt to *burrow*, as it were, beneath the top of the shoulder. Here we need the "*fourth position.*" For this the patient crosses arms in front, slightly stooping, *hooks* the hands at the loins, or false ribs, and then stretching upward, he holds fast to increase the tension. The physician aids from behind, by pressing down firmly the shoulders. They are thus *slid off*, the muscles are smoothed down, and the ear, coming closer upon the top of the lung, hears better the sounds.

6. *As worth more than all the rest*, we commend the "*fifth position*," for by natural machinery it wrenches the shoulders forward *out of their beds*, and widely severs them in the rear. In thin persons it often thus stretches out their intervening muscles till like stout broadcloth, it thus quite uncovers the inner and upper part of the lungs behind. To accomplish this, the patient crosses arms in front, with the stronger outside, grasps with the opposite hands the *two shoulder joints*, pulls both strongly, and holds fast, to keep them tense. The physician aids to fix the shoulder blades widely apart at the back by firmly pushing. Even in health, as any one can prove, the soft breathing murmur at the former place of the scapula can be thus nearly doubled. In tubercles it here opens a new field for *palpation*, and especially for *percussion*. It intensifies harsh respiration, or "fatty crackling." In pneumonia, it exaggerates the clear, barrel-like echo of "bronchophony," and in pleurisy that line between wind and water, the trembling "egophony." It brings out a delicate *new sign*, we have discovered, in bronchitis. It is a kind of prolonged liquid breathing, as if through a layer of wet sponge, heard before or after mucous râles, which we venture to name *moist respiration.*

7. Another new and really useful "physical sign" we have to communicate, is *the comparative stiffness of the shoulder over the lung most diseased, in strong*

breathing, seen and felt from behind. For this we may use the "*sixth position.*" Facing the back of patient, a yard distant, near a window or white wall, you tell him to drop his arms, let them hang easily by the sides, "as if dead," and then breathe deeply for a few moments, "like a man a little out of breath." You now "take aim," like a rifleman, across the tops of the shoulders, and then shut your eyes and *feel* them gently swell. Drawing nearer, you notice that the "inferior angles" of the scapulæ move gently in breathing like the fins of a fish. You can both *see* and *feel* this movement. This *stiffness* of the shoulder in breathing may be decided, or slight, local, or general. When most at the top, we term it, for convenience, "acromial," and when most at the lower extremity, or inferior angle, we call it "angular." Curiously enough, these last features seem to depend on the higher or lower location of the disease which thus, as it were, *paralyzes the parts nearest.* An elegant way of testing "angular stiffness," even in a lady fully clad, is to place your two index fingers on the lower points of her shoulder blades, and watch and feel their movement as she sighs. The causes of this stiffness are supposed to be *loss of upward expansion* in the lung, tenderness, pleuritic adhesions, and weight of morbid deposits. A table of eighteen cases is added, illustrative of this sign. It was least in recent attacks; varied most in phthisis; was slightest in pneumonia, and greatest in chronic pleurisy.

8. A statement of measurements of ten males, shows the gain in inches, and decimals, by "third," "fourth," or "fifth," positions respectively, between the inferior angles of the scapula, and the lowest lumbar vertebra; the "superior angles" and the vertebra prominens of the neck and between the two upper and two lower angles of the scapula. Of the whole of the six positions, the first, fourth, *fifth*, and sixth are the most frequently useful. The others apply to particular cases. Taking into account the pulmonary complications of other diseases as well as the range of "chest disease," it is believed these various improvements, slight as they seem in detail, really throw light, perhaps, upon many forms of *one-third of the fatal maladies of the race.*

9. On account of its fearful importance, it is hoped they will mainly benefit *tubercular consumption.* Tracing, faithfully by various "marks," and the unhealthy habits of the patient, the agencies leading to the two prevailing causes, *feeble organization* and *depraved nutrition*—by prompt reform of abuses, generous *animal food*, and free exercise in the *open air*, with tonics, and *cod-liver oil*—we may do much to arrest the disease. *Occasionally we may cure.* The encouraging researches of Hughes Bennett, and Messrs. Rogée and Boudet show that from the numerous chalky concretions puckerings and cicatrices found at the tops of the lungs in very aged persons, it is probable that *about one half have recovered* from more or less tubercular deposits during their lives. Four living cases from several others are reported by the writer of arrest or cure of phthisis of several years' standing. The great question of this paper then is, *What may be the result of average notice, say three months sooner?* Time only can tell. Each physician who reads this is earnestly requested to aid by a faithful trial of this system of examinations in at least *three suitable cases.* The malady is still widely and deplorably fatal. From extensive trial, we firmly believe that, simple as they may seem, this *management of the shoulders*, these expedients for *thinning, condensing*, and *tightening the fleshy walls of the chest, add fully one third to our power of detecting the earliest signs of consumption.*

49 EAST BROADWAY.

ART. II.—*Classification of the Diseases treated at the New York Eye Infirmary during the year* 1858, *with brief Remarks on the Treatment.*

By F. J. BUMSTEAD, M.D., Assistant Surgeon.

DURING the past year, four thousand two hundred and nine cases of diseases of the eye and ear have been treated at the Infirmary. The following is a classification of these diseases:

DISEASES OF THE EYE.

Inflammation of the Orbit	3
Inflammation of the Lachrymal Passages	116
Wounds and Injuries of the Lids	16
Inflammation and Abscess of the Lids	34
Entropion and Ectropion	26
Trichiasis	8
Tumors of Lids	38
Cancroid Tumors of Lids	5
Tinea	213
Hordeolum	33
Nævus	3
Conjunctivitis	852
“ purulent	50
“ neonatorum	15
“ pustular	392
“ granular	426
“ strumous	156
Symblepharon	8
Pterygium	12
Tumors of the Conjunctiva	2
Corneitis	108
Abscess of Cornea	8
Ulcer “ “	257
Opacities “	157
Foreign particles	56
Pannus	4
Slough of Cornea	48
Staphyloma	36
Conical Cornea	3
Aquo-Capsulitis	17
Hypopion	2
Sclerotitis	36
Iritis	110
Atresia Iridis	5
Synechia	14
Laceration of the Iris	1
Prolapsus Iridis	7
Dislocated Lens	2
Cataract	86
“ pseudo-membranous	2
Asthenopia	36
Nyctalopia	2
Muscæ	4
Choroiditis	22
Retinitis	6
Amaurosis	147
Glaucoma	9
Mydriasis	1
Diplopia	1
Internal Ophthalmia	5
Myopia	5
Presbyopia	2
Orbital Neuralgia	4
Paralysis of Orbital Nerves	10
Ptosis	4
Blepharospasm	1
Strabismus	27
Lagophthalmos	1
Exophthalmos	1
Sunken Globe	7
Injuries of Globe	129
General Ophthalmia	16
Total	3,908

DISEASES OF THE EAR.

Eczema	3
Abscess behind Pinna	1
Periostitis of Mastoid Process	2
Caries of Mastoid Process	2
Inflammation of External Meatus	10
Abscess “ “ “	8
Ulcer “ “ “	2
Polypus in “ “	8
Impacted Cerumen in External Meatus	37
Excess of Cerumen in External Meatus	1
Foreign body in External Meatus	2
Otorrhœa	56
Myringitis, Chronic	40
“ Acute	25
Perforation of Membrana Tympani	14
Destruction of Membrana Tympani	4
Inflammation of Cavitas Tympani	21
Disease of Internal Ear	7
Cerebral disease	3
Tinnitus	4
Syphilitic deafness	5
Senile “	2
Rheumatic “	1
Deafness from Plethora	1
“ “ Intermarriage	1
Deaf-mute	2
Closed Eustachian tube	1
Faucitis and Myringitis	3
Cases not classified	35
Total	301

The above classification may appropriately be followed by some remarks on the general plan of treatment adopted at the Infirmary, in some of the diseases of the eye. It will be evident, however, that where the subject is so extensive, these remarks must be brief, affording only a sketch of the mode of practice.

Simple Conjunctivitis.—The great majority of cases of acute and sub-acute conjunctivitis require no treatment, except cleanliness, a free purge, and *the avoidance of improper applications to the eye.* Confinement in a dark room is never directed, nor even to the house, except in wet weather; indeed, daily exercise in the open air is considered to be essential to a speedy cure.

Medicated lotions and drops, to be applied within the lids, are never directed in simple acute conjunctivitis, in which the secretion is only aqueous. Instead of benefiting, they irritate the inflamed eye, and do harm. The patient is ordered to bathe the eye frequently with cold or warm water, whichever is the more agreeable to him. No invariable rule can be laid down with regard to this, but generally at the outset of the inflammation, cold applications will be the more pleasant; but as soon as the inflammation is fairly established, the warm will be preferred. Simple cerate is prescribed to be smeared upon the edges of the lids at night, to prevent their adhesion.

These measures, aided perhaps by the exhibition of a free purge, are all that is required in most cases. Leeches to the external canthus, or cupping from the temples, may be of service at the commencement of the treatment, if the case be a severe one, and the patient of full habit.

Avoidance of improper applications to the eye has already been referred to, and among these, poultices, and a multitude of popular remedies which act like poultices, such as tea leaves, pieces of salt pork, alum curds, raw oysters, etc., are deserving of special censure. Very many of the patients who apply at the Infirmary have had their disease aggravated, or its duration prolonged, by such meddlesome interference. A poulticed eye may generally be recognized at a glance by the excessive injection of its vessels, and the œdema of the subconjunctival tissue. A perfectly healthy eye may be destroyed in a few days by the continuous application of poultices. Particular care is taken to impress upon patients this injunction: *never, under any circumstances whatever, to apply poultices to the eye, when any portion of the globe is diseased*; and it would be well if the importance of this precept were more generally recognized by the profession. During the past year, an infant, three weeks old, and afflicted with ophthalmia neonatorum, was brought to the Infirmary, after a course of poultices for two weeks, directed by the attending physician, when both eyes were found to be staphylomatous, and all hope of vision lost. Similar cases are of very frequent occurrence.

In some instances, simple conjunctivitis assumes an irritable and subacute character, with little or no tendency to recovery. Such is likely to be the case in patients who were originally weak, or who have been debilitated by prolonged lactation, improper treatment, or confinement to the house. Tonics, generally quinine, or some form of iron, a generous diet, fresh air and exercise are here required. The irritability of the eye may be relieved by the application of tincture of iodine to the brow, or by exposing the eye to the fumes of boiling water, to which has been added a tablespoonful of a mixture containing equal parts of tincture of camphor, laudanum, and dilute acetic acid.

In the present report, cases of catarrhal conjunctivitis are classified under the head of simple conjunctivitis, although the treatment—the discharge being muco-purulent—is more akin to that of purulent ophthalmia.

Purulent Conjunctivitis.—Mr. Critchett lays down the rule in the treatment of this disease, that "Local stimuli, of which a solution of nitrate of silver is to be preferred, are useful in all cases of conjunctivitis, in which the discharge is of a muco-purulent or purulent character, provided the disease be limited to this membrane, and has not extended to the cornea or other tissues of the eye." The truth of this precept is confirmed by the experience of the Infirmary. The effect, however, should be watched, and if the pain in the eye be increased and the symptoms not ameliorated after a few applications, the case has probably been mistaken, and the drops should be discontinued.

Purulent conjunctivitis is regarded as a local and not a general disease. The old treatment by venesection, tartar emetic, and mercury is entirely abandoned. Local depletion, by means of cups or leeches, is sometimes resorted to at the outset, especially in patients of full habit. Cleanliness is of the first importance. The eyes should be carefully freed from all collections of purulent matter, as often as is necessary, to keep them constantly clean. No greater heresy was ever promulgated than the doctrine that the pus is the natural covering of the inflamed eye, and that it should not be interfered with. The discharge may be washed away with simple warm water, or a decoction of poppy heads may be used, with the addition of a drachm of alum to the pint. A solution of nitrate of silver, of the strength of from five to ten grains to the ounce of distilled water, should be dropped into the eye, after cleansing it, three or four times a day.

A free purge may be given at the outset of the treatment, but care should be taken not to repeat it too often, nor to depress the patient by any means whatever. The worst cases of purulent ophthalmia occur in subjects whose systems are already much below par, and in the majority of cases nourishing food and even stimulants, quinine and iron are called for, and will be found to favor the cure of the disease and avert ulceration or sloughing of the cornea, which is most to be feared.

When the conjunctiva surrounding the cornea is elevated by effusion beneath it, so as to bury the cornea in its folds, the radiated incisions recommended by Tyrrell are resorted to, though it is not probable that the benefit obtained is due to the relief of the constriction, as Tyrrell supposed, but rather to the local depletion.

The number of cases of gonorrhœal ophthalmia and ophthalmia neonatorum that apply to the Infirmary, is not large; but this number may be taken as an index of the usual proportion of these diseases to all affections of the eye.

Gonorrhœal ophthalmia is to be treated strictly on the principles already laid down, viz.: by local depletion in some cases, the strictest cleanliness and the application of a solution of nitrate of silver every two or three hours. It is especially in this class of patients, who are usually debilitated, that general depletion, antiphlogistics and the use of tartar emetic and calomel (except as a purge) are to be avoided, and a generous diet, stimulants and the various forms of tonics, especially quinine in large doses, to be resorted to.

One or two cases a year are generally met with at the Infirmary of purulent ophthalmia in girls, from three to six years of age, and who are also suffering from a purulent discharge from the vagina. There is every reason to believe, from careful inquiry into their history, that this discharge is not of venereal origin. The disease of the eye usually occurs subsequently to that of the vagina, and is probably due to direct contagion by the application of matter. These facts support the views of those who regard gonorrhœa as a simple urethritis or vaginitis, since they show that the power of contagion of the discharge does not necessarily imply the existence of a specific virus.

In almost all cases of ophthalmia neonatorum, it is found that the mother was laboring under leucorrhœa at the time of the birth of the child. No constitutional treatment is resorted to in these cases. The nurse should be instructed how to cleanse the eyes by gently retracting the lids by means of the finger, covered with a bit of muslin to prevent its slipping, and then sopping up the secretion with a piece of rag, which is to be preferred to a sponge. Once an hour is not too often to repeat this, if the discharge be abundant. The concretion of the matter and adhesion of the lids will be prevented by smearing them with simple cerate after washing. The local astringents used, and which are to be dropped into the eye from three to six times a day, are a solution of nitrate of silver, of the strength of three grains to the ounce of water, or a solution of alum, five grains to the ounce. The injection of these solutions by means of a syringe is not recommended. In unskillful hands, the eye is apt to be irritated by this instrument, and the solution is applied with sufficient thoroughness by simply dropping it between the separated lids after the discharge has been all removed.

Strumous and pustular conjunctivitis.—These varieties of conjunctivitis, it will be observed from the list of cases, constitute a large proportion of the diseases treated at the infirmary. The two are here grouped together, because they are in many cases essentially the same in character. Strumous ophthalmia is generally a disease of childhood, and often presents the small, whitish prominences which are variously called pustules or phlyctenulæ by different authors. Under the same head, also, many of the cases classified in our report as ulcers of the cornea would legitimately come, since the ulcer is nothing but a sequela of a pustule, formed by the bursting of the latter.

Cases of pustular ophthalmia are also met with not unfrequently after the age of puberty and in adults, but it is generally in subjects who are debilitated and whose digestive organs are deranged. But it is particularly of these affections in children that we are here speaking, among whom they are so frequent as to deserve the name of "The eye-disease of childhood." In the treatment of these cases, the chief reliance is placed upon general hygienic measures. The mother receives minute directions as to the dress, food, and general management of her child. Bare arms and legs are directed to be covered, especially in winter and the variable weather of spring and autumn. A diet of bread and milk, fresh meat and vegetables, and the avoidance of salt meats, pastry, candies, apples, tea and coffee, is directed. The child is not to be allowed to bury its face in a pillow, to be shut up in a dark room, or to have its eyes bandaged. It should spend as much time as possible in the open air daily. In addition, a warm bath should be given every night at bed-time, and one or two grains of rhubarb, with as many of soda or ipecacuanha administered at the same hour. Adhesion of the lids is prevented by the use of simple cerate, and cleanliness of the eye is enjoined.

Such simple measures as these will in many, perhaps in most a day for several days at the outset of the treatment, but is not to be continued for any length of time. All the good that can be expected from it is attained in a few days. It is found to relieve the photophobia, and prepare the way for other remedies, which are for the most part tonics.

Scarifications, in cases of granular lids, are very rarely resorted to at the Infirmary; division of the corneal vessels never. The latter procedure is objectionable in theory, and found to be injurious in practice. A case in which it had been used was brought to the Infirmary for consultation during the last year, in which obstinate ulceration of the cornea was the result, and the eye was with great difficulty saved.

Keratitis.—In pustular conjunctivitis the pustules are often situated upon the cornea, and in granular lids also the cornea rarely escapes; but in both these instances it is the external or conjunctival layer which is involved, and it is better to reserve the term keratitis for the inflammation of the deeper structure of this membrane, most commonly met with in young persons, and characterized by a hazy condition of the cornea, and a plexus of fine vessels in the sclerotic, surrounding to a greater or less extent its circumference.

This disease appears with various degrees of severity, and, in its worst forms, is one of the most intractable of all diseases of the eye. The same principles of treatment are adopted as already laid down for strumous conjunctivitis. Photophobia is relieved by the application of tincture of iodine to the brow, but our reliance for the cure of the disease must be based upon hygiene, regulation of the digestive organs, and tonics. The various forms of iron, quinine, cod liver oil, and iodide of potassium, will be called into requisition, but will not take the place of fresh air, exercise, and good nourishment. Mercurials are sometimes administered, but always in a mild form, and in connection with tonics, and are never pushed to salivation.

The cornea is a membrane of low vitality, and whenever ulceration or sloughing exists or is threatened, no matter how great the injection of the vessels of the eye may be, it is of the utmost importance not to depress the vital powers. Indeed, it cannot be too often impressed upon the minds of practitioners, that this condition is not to be met by mercurialization, tartar emetic, venesection, low diet, etc.; but that good diet, tonics, and even stimulants, are required to stay the destructive process, and save a part which is so essential to vision.

Having thus briefly considered the treatment of some of the diseases of the more external portions of the eye, which are most frequently met with in practice, and familiarity with which is most desirable, the limits of the present paper will not allow us to extend our remarks to diseases of the deeper structures, with regard to the treatment of which there is, moreover, less room for a difference of opinion.

I will simply say that in the treatment of the latter diseases, as has already been indicated with regard to the former, the general condition of the patient should never be overlooked while attending to the local malady; and, as in the class of patients who apply to a public institution like the Infirmary, this general condition is for the most part one of debility, tonics find a large place among our therapeutic means.

There are two formulæ in the pharmacopœa of the Eye Infirmary, which are probably used more than any others in cases where a mercurial is required, and which are very happy combinations of a mercurial and a tonic, with the addition in one of a sedative. They are commonly called the "grey powder with quinine," and the "compound grey powder." The formulæ for them are as follows:

℞. Hydrarg. cum Cretâ, gr. ij.
Quiniæ Sulphatis, gr. j.
M. et ft. plv.

℞. Hydrarg. cum Cretâ, gr. ij.
Quiniæ Sulphatis, gr. j.
Pulveris Doveri, gr. iv.
M. et ft. plv.

In cases of iritis, amaurosis, etc., in weak subjects, these combinations are invaluable.

In hypopion a treatment is adopted, which is regarded as almost specific. It consists in administering one of the above powders morning and night, and from two to eight grains of quinine, in the interval, during the day; varying the prescription, of course, to suit the age and condition of the patient.

In the year 1856, Dr. Henry W. Williams, of Boston, published a report of sixty-four cases of iritis, both primary and of specific origin, treated successfully without mercury, by means of quinine and iodide of potassium internally, and depletion and belladonna locally. This report has excited some attention both at home and abroad.

Without doubting the accuracy of the observations of Dr. Williams, who is a most skillful and accomplished ophthalmic surgeon, it must be confessed that his treatment has not been as successful in other hands, at least in ours, as in his. Soon after the publication of the paper alluded to, I tried the treatment recommended by Dr. Williams in twelve or fifteen cases; and, while it answered well in those patients who had had a recent attack of iritis previously, or who were much debilitated, in other cases—first attacks in persons of good constitution—it failed, and I was obliged to have recourse to mercury.

The importance of tonics, *in combination with mercurials*, in the treatment of iritis in debilitated constitutions, should never be forgotten. This was fully insisted upon in the admirable work of Mr. Tyrrell on the eye, and has since been recognized by most of those who have made a specialty of this class of diseases.

The ophthalmoscope is in constant use at the Infirmary, and, although it is felt that we are not as yet fully able to interpret all the appearances presented by it, yet it is regarded as an instrument of great value, and one that we could not now dispense with. The slightest shade of lenticular or capsular opacity can be recognized by it, long before the cataract is sufficiently developed to be visible to the unassisted eye. In amaurosis, the knowledge of the condition of the internal structures gained by such examination, is relied upon to decide whether treatment is likely to be beneficial or not. Where extensive disorganization, such as sub-retinal effusion, inflammatory deposits, etc., are visible, the case is abandoned as hopeless; where but little change from the normal condition is apparent, treatment is undertaken with the prospect of success, and the result usually justifies the prognosis.

It is proposed in future to publish in the pages of this Journal, a quarterly report of the cases treated at the Infirmary, in which illustrations of the preceding remark will be given. In these reports also will be found some account of operative surgery on the eye, as it is at present practised at the Infirmary—a subject which has necessarily been omitted in the present paper.

274 Sixth Avenue.

ART. III.—*The Hymen; an Essay delivered (by appointment) before the "New York Medical Union."* By T. GAILLARD THOMAS, M.D., of New York City.

GENTLEMEN: In the virgin there exists, at the entrance of the vagina, a thin veil, formed by a reduplication of the vaginal mucous membrane, which, while it precludes the entrance of any bulky substance into the canal above, admits in its normal condition of the free passage outwards of uterine and other discharges. This delicate membrane, in itself of so little importance, that its uses are even now unknown, and that its very existence was for centuries doubted by able anatomists, is, by its associations, and collateral relations, so important to the practitioner of medicine, that I trust you will not regard as injudicious the choice of the subject of my remarks for this occasion.

Origin of the term Hymen.—The names which we find by various authors applied to this membrane, are "Engion," as sometimes called by old writers; the "Flower of Virginity," as styled by others; and "Hymen," as designated in the nomenclature of modern times.

The etymology of the last appellation is somewhat uncertain. In the mythology of ancient Greece, a god named Hymen, the offspring of Bacchus and Venus, was supposed to preside over marriage, and it is possible that his name was given to that membrane, the rupture of which was regarded as the carnal consummation of the ceremony of which he was the patron.

From its crescentic shape, it is by some supposed to have been the symbol represented upon the brow of the virgin goddess Diana; the outward and visible sign of inward purity and unblemished chastity; But as Diana and Luna were the same spirits, it is more natural to suppose that the sign which she bore had reference to the crescent moon.

Anatomy, and not poetry, was probably mother to the name, the origin of which, it is likely, was the Greek word "ὑμὴν;" in the Latin rendered "hymen;" and in the Saxon tongue "a membrane." By some of the old writers the word hymen was applied not only to this structure, but to any membrane, as the serous covering of the lungs, liver, heart, etc., as will be seen by reference to the "Chirurgia Universalis" of Francis Joel, edition of 1663. We see an analogous use made of the word in entomology, where all that class of insects whose wings are membranous, are called Hymenoptera, from "ὑμὴν" a membrane, and "πτέρον" a wing, and a beautiful similitude exists between its use in botany and anatomy; in the former it designates the fine pellicle which incloses the flower in the bud; in the latter it defines the gauze-like veil, which guards the budding functions of womanhood; both about to expand and culminate coincidently with its rupture.

Literature of the Hymen.—An examination into the history of the hymen, presents one of the most singular instances of direct contradiction of authorities, on a subject which one would at a first glance imagine admitted of no doubt, or diversity of opinion. Indeed, were proof wanted (which, alas! is not the case) of the great uncertainties environing the reception of even the simplest facts in medicine, none more convincing could be given than that arising from a review of the opinions held on this subject at various periods.

That the most ancient people of whom we know aught, were acquainted with the existence of the hymen, there cannot be any reasonable doubt; for a distinct allusion is made to it in the writings of the Hebrew legislator, Moses, who lived Anno Mundi 2433, his death occurring 1,490 years before the birth of Christ. After this I have met with no allusion to it until 194 years before Christ, when Terence seems to allude to it in describing the pain and hemorrhage attending the first conjugal approaches of a virgin. Cicero, who lived 42 years before Christ, points plainly to it in the following line (De Divinat. lib. ii.), referring to a woman of whom he had dreamed, "quæ obsignatam habebat naturam;" and Pliny (Hist. Nat. lib. vii., c. 16), A. D. 23, tells of Cornelia, mother of the Gracchi, "concreti genitali nata fuerat;" a probable though not positive allusion to it. But the most perfect and intelligent allusion to it, which exists in the writings of the olden time, is that contained in the old Jewish work called the Mishna. The exact date of this work is unknown; its parts were put together in the second century of the Christian era, but it dates certainly much farther back than that period. There, it is not only mentioned, but its characters were evidently pretty well understood, as will appear from a quotation which will be made from it later in this essay.

It may well be a matter of surprise to you that I thus quote from vulgar writers, and draw nothing from the works of Hippocrates, who flourished 456 years before Christ, nor from the writings of the Alexandrian school, nor yet from the 300 volumes left us by Galen, who lived 201 years after Christ. Curious as it may appear, no mention of the hymen occurs in the medical productions of those periods; Hippocrates, Galen (if we except this meagre allusion, vol. ii. p. 907, "Qua vero parte dilatato uracho membrana incipit enasci, satis multa ac veluti scabra quædam asperitas apparet"), and the disciples of Alexandria, all are alike silent concerning it.

Coming now to the time when learning took up its abode among the Arabians, we find, according to Paul Portal, that so much obscurity attaches to the allusions to the hymen by physicians of that period, that doubt exists as to their knowledge of it. Avicenna, however, who is regarded as having compiled, in a great part, his works from those of his predecessors, Galen, Rhazes, and Halyabbas, and who died in the year of our Lord 1036, speaks of it as a structure composed of veins.

I have now said, I think, enough to show that it is extremely probable, to say the least, that the existence of the hymen was recognized by the ancients: let us now leave those remote ages, and coming to the period when science rose from its long submersion during the middle ages, bring the subject to the present day.

In the 16th, 17th, and 18th centuries, anatomists were entirely divided as to the existence of this membrane, and the very first authorities of the time were arrayed against each other in opinion. Thus, Oribasius, Ambrose Paré, Varolius, Palfyn, Dionis, Buffon, and many others denied its existence, while the equally weighty names of Vesalius, Morgagni, Ruysch, Bartholinus the younger, Riolanus (whom Haller compliments with the quaint title of "restitutor hymenis"), Osiander, Smellie, Winslow, Meckel, and a host of others supported it.

Some even who found it, regarded its existence as abnormal; thus, Varolius thought it an adhesion of the nymphæ; others regarded it as a morbid stricture of the parts; Fernelius and Ulmus viewed it as a vaginal adhesion, while Buffon pronounced it a myth. Well might Bichat say that it was impossible to explain this diversity of opinion; but as it is curious, and may be profitable, let us try to do so as far as possible. The following considerations will, in some degree, account for it. First.—During the fifteenth, sixteenth and seventeenth centuries, dead bodies for dissection were obtained with great difficulty (as the familiar and suggestive picture of Vesalius dissecting in an obscure and secret cell, will readily bring to mind), and the material, which did afford the means for investigation, was generally the remains of the most abandoned prostitutes, or executed criminals. In such subjects, of course, the hymen was generally absent.

Second.—Just after the dark ages, when theory passed for fact, and proof was not required to render assertions valuable, physicians were more willing than at present to accept the errors of their predecessors, and indorse them without examination; and thus, it is probable, that many inconsiderately joined in a view, of the correctness of which they had made no effort to inform themselves.

Third.—It may be said that libertinism was at that period much more unbridled, and its domain much more extensive than at present. It is easy for moralists to point to the backslidings of our times, and bewail the fearful increase of immorality; but that the world has, since the dark ages, steadily advanced in morality as civilization has spread, is, I think, a fact supported by evidence too strong to be shaken by bald assertions, or overturned by specious arguments.

A fourth reason may yet be given. It is natural for the mind to reject even positive evidence, from a multiplicity of sources, when that evidence differs in each case in many important particulars. Now, all the descriptions of this membrane, so hard of discovery, differed more or less; thus, one would describe it as a slender band, another as a circle pierced with holes, and a third as an unopened disk, hard and unyielding; so that even an unprejudiced investigator might (in ignorance of the fact that, like the mouth or nose, the hymen may assume a variety of forms) reject the small amount of positive evidence which he could obtain, and agree with those who regarded this "slight outward curtain to the nuptial bed" as the offspring of poetic imagination.

Anatomy of the Hymen.—Of the divers descriptions given of the hymen by the pioneers in anatomy, the following are specimens. Avicenna, of the Arabian school, regarded it as "a piece formed of fine veins, at the middle of the neck of the womb (vagina), inserted on either side." Riolanus considered it fleshy; Fallopius nervous; while one old writer, Picolhomini described it very much as it is now regarded.

At present it is known to be, simply, a fold of the mucous membrane which lines the vagina, stretching from side to side of that canal, just within the ostium. Like the rest of the vaginal mucous membrane, it is covered by pavement epithelium, the largest in the body, and between the two folds of membrane, cellular tissue may be found, in which run vessels coming from branches of the internal iliac arteries, and neves from the internal pudic; while its absorbent vessels communicate with the sacral and inguinal glands. Velpeau describes in it, likewise, some muscular fibres which he has found crossing each other, and resembling the fibres of the uterus; no other author, however, as far as my knowledge goes, supports this statement.

In color the hymen is of a reddish, fleshy hue, and generally in texture thin and delicate; though in the infant it is somewhat thicker than in the adult. In the infant it differs, also, in direction from that of the adult; lying against the vaginal walls, extending from behind forwards, like the lips, it gradually stretches itself across the canal as the parts enlarge with increasing age.

As a rule, there is but one hymen, though cases in which two existed, one above the other, are mentioned by Willis, Ruysch, Legros and others.

As regards the shape of this structure, much might be said, as may be supposed from the fact that thirty different varieties have been enumerated. It is not my intention to consume your time with a mention of them, but I will be satisfied by exhibiting to you, by means of the accompanying diagrams, those forms which are most commonly met with in practice.

The most common form which it assumes is that of a crescent, with concavity above, towards the symphisis pubis; next to this is met with most frequently the circular, with fringed border and opening of greater or less size at the centre; after this come, in unascertained order, the disk, covering the mouth of the whole canal, perforated by holes; irregular bands, stretching across from wall to wall; and lastly, a disk without opening, occluding the passage entirely.

This membrane appears in the fœtus, according to Cruveilhier, after the sixth month of intra-uterine life, and unless broken, continues to be found until the sixtieth or seventieth year, and even beyond those periods. When it is ruptured, a good deal of pain is caused, and a flow of blood generally (though it is said not always) takes place. This flow is not profuse, and ceases of its own accord; the only case which I have seen recorded to the contrary being one by Dévilliers, where surgical aid had to be called in to check it.

Comparative Anatomy.—The comparative anatomy of the hymen was for a long time overlooked; it was supposed to be peculiar to the human female; but, as first demonstrated by Duverney, and subsequently abundantly supported by facts ascertained by others, it is by no means so. In a paper read by Mr. Duverney, before the "Institute," in 1805, its presence was pointed out in virgin mares and asses, in which it is semilunar in form; and in the brown bear, in which it consists of a thick fold shutting up a large part of the vaginal orifice. In the ape and monkey (according to the Nouveau Dict. d' Hist. Nat), it consists of two bands, crossing from side to side. It is found, also, in the hyena, the coati, the otter, the hare, and Velpeau says, the giraffe. The elephant is likewise provided; and Stellar has discovered it in the seal, the daman and the lamantin.

In these animals, as in woman, it is generally ruptured by the first sexual approaches.

Physiology and uses.—What wise purpose does the hymen subserve? It is, indeed, difficult to say. Some, and among others Haller, erroneously supposing it to exist only in the human female, regarded it as a protection against vice; as the thorn of virtue, which so often we see, reminding us not to cull too eagerly the flower of gratification, and of sin. But why, then, should it exist in the lower order of animals, where no such restrictions are needed? nay, where they would be absolutely hurtful, in controverting the command, "increase and multiply," obedience to which so much conduces to the benefit of mankind?

Thomas Bartholinus expressed the opinion, that it was to guard the internal organs against contact with external objects, and to act as a test for virginity; and in a part of this, Cuvier seems to agree, attributing to it, as a function, the keeping unimpaired the sensibility of the delicate internal organs until the period of conjugal life.

Support for this view might perhaps be found in the analogy which exists, with regard to this membrane, between the vagina and other canals leading outwards from delicate internal cavities. According to a general law of the economy, such passages are provided in some part of their courses, and generally near their entrances, with a sphincter, the action of which is rendered more perfect by a fold or folds of mucous membrane. The object of such reduplications seems to be to exclude more perfectly external influences; to retain until a fitting time the contents of the cavity which they guard; or to furnish a surplus tissue for the more easy and safe distension of the passage. Thus, in the rectum, the late Mr. Houston, of Dublin, described "certain permanent folds or valves of semilunar shape," situated just within the sphincter ani, and extending upwards one above the other for a space of three inches. When the intestine is empty, these folds overlap each other, and will catch a bougie and stop its passage; while in the distended state of the gut they disappear.

In the fauces a somewhat similar arrangement exists, in the velum pendulum palati and palatine arches; in the larynx, in the epiglottidean folds and in the urethra, in the sinuses of Morgagni, or in the special valve situated on the superior surface of that canal described by Guérin de Vannes in the *Gazette Médicale* for 1849.

It appears to me, however, that in search of a more probable and rational explanation of the presence of the hymen, we are forced to rest on the striking analogy which exists between the male and female generative systems, acknowledging at the same time that its special uses are by no means clear. By some of the Greek, Roman, and Arabian physiologists, among whom may be cited Aristotle, Galen, Rhazes, and Avicenna, it was supposed that the two sexes were typical of each other; that the female was an inverted male, and that in her the penis and testicles were merely turned inwards to form the uterus and ovaries; and this doctrine has, in modern times, received extensive credence, and caused considerable discussion.

As this is not the place to discuss the subject, let me merely call your attention to some of the most evident and important of these analogies:

The Testes are analogues of the ovaries.
" Prostatic vesicle is the analogue of the uterus and vagina.
" Penis " " " clitoris.
" Scrotum " " " labia majora.
" Perineal closure of genital sinus " hymen.

Thus the hymen would appear to be only the partial closure of a fissure, which in the male is complete; when it goes on to completion in the female it constitutes an abnormity, as the falling short of completeness in the male likewise does.

Singular customs and superstitions regarding the hymen.—For the ancients, the hymen was invested with much that was mysterious and inexplicable, and they seemed to have delighted in surrounding it with the most curious superstitions, and attaching to it the greatest importance.

Scaliger, who flourished, I believe, in the latter part of the sixteenth century, in describing the properties of a certain root which had the power of causing lustful thoughts, declares that "Virgins that look to cattle in the fields, if they sit thereon, or make water, it is said that the skin in their privity will break, as if they had been defloured by a man." Here an entirely emotional cause was deemed sufficient for its rupture.

But they even supposed that the wind, the sun's rays, and similar causes, would break it; thus the "most learned Bartholinus" states that the Prayan virgins of Campania had it so thin that it was ruptured in them at the twelfth year, "partly by the heat of the sun, partly of their own bodies."

Its rupture was regarded by them as a proof of immorality, and its presence a guaranty of chastity. In cases where impregnation occurred without such rupture, they easily escaped conviction of error, by supposing that it took place through the influence of the winds, as Ludovicus Carius reports, or from the imagination, as in the case of Magdalena d'Auvermont, "who did conceive a son called Emanuel only by imagination."

Scott, in the following lines, refers to these old superstitions, in describing the Hermit of Benharrow:

"Of Brian's birth strange tales were told:
His mother watched a midnight fold,
Built deep within a dreary glen,
Where scattered lay the bones of men
In some forgotten battle slain,
And bleached by drifting wind and rain."
"She said no shepherd sought her side;
No hunter's hand her snood untied;
Yet ne'er again to braid her hair
The virgin snood did Alice wear!
Gone was her maiden glee and sport
Her maiden girdle all too short.
Nor sought she from that fatal night,
Or holy church, or blessed rite,
But locked her secret in her breast,
And died in travail, unconfessed."

But not only was the presence of this membrane regarded as a test of virginity, its rupture must be accompanied by an effusion of blood, or the good name of the unfortunate was gone forever, and she given over to the censure of the world.

In the twenty-second chapter of Deuteronomy, the following commands appear, offering a marked evidence of the stern requirements of the age which gave birth to the laws of the Hebrew legislator: "If any man take a wife, and go in unto her, and hate her, and give occasions of speech against her, and bring up an evil name upon her, and say, I took this woman, and when I came to her, I found her not a maid," then shall the parents of the girl show the tokens of her virginity to the elders of the city, in the gate, "and they shall spread the cloth before the elders of the city." If the cloth was found to have the requisite tokens upon it—namely, blood stains—then the elders were ordered to chastise the man, to fine him a hundred silver shekels, and make him adhere to his covenant with the woman. But, alas for his unfortunate wife, if no hemorrhage has occurred! "Then they shall bring out the damsel to the door of her father's house, and the men of the city shall stone her with stones that she die; because she has wrought folly in Israel, to play the whore in her father's house." Who can tell how many an innocent damsel may, under this law, have fallen a sacrifice to the fearful necessities of the times!

The custom of allowing the reputation of a woman to depend upon the occurrence of this slight and unimportant hemorrhage is said by Gardien to exist among the Bedouins; by Mahon it is said to be found still in Siberia; by Niebuhr among the Arabs in Yemen; while others assert the same of parts of Russia, Asia and Africa. Among the Jews of the present day, as I am informed by the learned Doctor Raphall, it exists in no part of the world, and has ceased to do so for a very long period. Even in the Mishna, already alluded to, the following passage appears, showing conclusively that its writers not only appreciated the existence of the hymen, but were cognizant of the fact that its absence did not prove want of chastity. In the treatise Ketuboth, chapter i, 7th paragraph, may be found this advice to the husband who suspects the virginity of his bride, "Should she assert, 'I have been fractured by accident,' while he replies, 'No, thou hast been defloured by a man;' Rabbi Gamaliel and Rabbi Eleazer say, she is to be believed; but the Rabbi Joshua saith, 'Not by her assertion are we to be guided; she is presumed to have been defloured by a man, unless she adduces proof.'"

In the "Arabic Proverbs," a curious work, by John Lewis Burckhardt, at p. 117, will be found the following description of a certain part of the marriage ceremony among the lower classes of the Moslem, at Cairo. The husband, after the marriage ceremony has been completed, and in fact as a part of that ceremony, goes to the chamber of the bride and breaks the hymen with a cambric handkerchief, or a part of her under garment, spread over his finger. Should the cloth come forth stained with blood, she is regarded as worthy of being his wife; if it comes forth unstained, she is viewed as an unchaste woman, and cast aside.

The cloth, if bearing the requisite evidences, is then, with great noise and triumph, taken by the female relatives of the woman, and paraded in the neighboring houses, as proof of her virginity.

Burckhardt, in his travels in Africa, affirms that those races residing on the banks of the Nile, between Sennaar and Thebes, are unwilling to trust even to these means for securing virgin wives, and make for themselves a barrier to deception, in addition to that which nature offers. At the age of from three to six years, the daughters of the chiefs have the clitoris cut off, and by aid of scarifications of the labia, they are made to adhere, so as to shut up the genital fissure, except at the pubic extremity, where a small opening is left for the escape of the menstrual blood. This practice is said to exist, likewise, among certain tribes of India.

But the most curious superstition relating to this subject, that I have ever heard of, is that described in the "Revue de l'Orient," 1st series, 4th volume, upon the authority, I believe, of the Abbé Dubois. In speaking of the tribe called "Namboury," as one of its peculiarities, is mentioned the fact of that singular people believing that the existence of the hymen after death constitutes a bar to the proper and decent interment of the body. The honor of the family requires that it should be broken before the ceremonies of the burial take place. But only in the natural way must this be done. Accordingly, a member of the caste is bribed into the performance of an unearthly and revolting deflourment, and the burial then proceeds. If, in any case, this ridiculous and disgusting ritual is not observed, the relatives of the deceased are regarded as disgraced forever.

Medico-legal relations.—It behooves every physician to be sufficiently familiar with this subject to answer, intelligently and positively, the following questions: Does the presence of the hymen indicate chastity, or its absence the contrary? This point, kept for an unfortunately long period sub judice, is now entirely put at rest with a negative answer to both questions.

That its presence is not a reliable sign of chastity, is conclusively and fully proved by numerous cases, from which I will select a few.

Blundell saw four cases where pregnancy had occurred without impairment of its structure; Ruysch was called upon to divide it, to allow parturition to take place; Capuron saw labor retarded by an unyielding hymen; and Baudeloque tells of one which the advancing head caused to rupture. Tucker reports a case in which not only did conception occur without injury to it, but remaining until labor, it resisted two or three successive and severe pains before yielding; and, to crown all, Parent Duchatelet, in his celebrated work on prostitution, tells of public prostitutes, who had for years followed their degrading profession in the streets of Paris, with the hymen so perfect as to leave even the most acute and experienced examiner in doubt as to their chastity.

The following interesting incident is related of Dr. William Hunter, who always expressed great confidence in the changes occurring in the areola around the nipples, as a sign of pregnancy. One day a subject was brought into the halls of anatomy, which Hunter, judging by his favorite sign, at once pronounced to contain a fœtus in utero. A vaginal examination was made to settle the point, when lo! a perfect hymen was found guarding the passage so faithfully to all appearances, that the defeat of the diagnostician was viewed as complete. Regardless of this, Hunter persisted in his diagnosis; section of the cadaver was performed, and, surely enough, a fœtus appeared as confirmation of his assertion.

But surprise at these statements will cease entirely, when the still more surprising (though not less authentic) one is made, that even parturition may occur without breaking it. Tolberg quotes a case from the elder Meckel, in which a fœtus of five months, surrounded by its membranes, passed without destroying it; Paré (who regarded its presence as abnormal) relates an instance in which he had to cut it after parturition, and Meigs in his "Obstetrics" says: "I have attended in all her confinements (and she has several children) a woman in this city, whose hymen is still perfect, and which never was torn, even in her labors."

With an accumulation of evidence like this, it might be supposed that jurists, as well as physicians, would be fully agreed as to the value of this membrane as a sign of chastity, and yet more than one instance has occurred within the present century to show that this is not the case. Thus, in the case of Rex *versus* Gammon, the Baron Gurney, before whom it was proved that violence had been done by the virile organ to the sexual parts of a young girl, pronounced the following as his opinion: "I think that if the hymen is not ruptured, there is not a sufficient penetration to constitute the offence. I know there have been cases in which a less degree of penetration has been held to be sufficient, but I have always doubted the authority of these cases." Such an opinion may well be pronounced to be a libel against the physicians of his time and the good sense of his century. This decision has since been overruled, and my conviction is that no conscientions and capable magistrate could at the present day screen an offender, with a mere quibble, the non-rupture of a membrane, the existence of which neither assures nor protects the sufferer from the fearful penalty of illegitimate maternity. How, then, is the physician who is called upon to examine the female organs in a suit for rape to judge in this matter? Surely by the circumstances of each case, untrammelled by rules which will not apply to all. Should the hymen be thin and delicate, and still uninjured, the aggressor could not have been very energetic nor successful in his attack. On the other hand, should it be found hard, elastic, or very yielding, the act may have been fully accomplished without injury to it.

Let it not be forgotten, while guarding ourselves against the error which will arise from an indiscriminate reliance, that the presence of a delicate and perfect hymen will often render it almost certain that the bearer is chaste. *As a link in the chain of evidence, the hymen is of value; as a conclusive and universal test, it is utterly worthless as a proof of virginity.*

As the presence of the hymen is not a reliable test of chastity, so is its absence no evidence to the contrary; for it may be in childhood or in adult years ruptured by ulcerative disease, prolapsus uteri, an imprisoned menstrual discharge, masturbation, falls, sudden separation of the thighs, the finger of a careless nurse in washing the parts, and a number of other causes. In some cases, too, it is congenitally absent, an occurrence by no means so remarkable as absence of the nose, the eyes, or any of the extremities. A case of this kind is recorded by Capuron, and Meigs expresses himself on the point in the following language: "There are thousands of pure, chaste, and not-to-be-suspected unmarried women in whom no vestige of the hymen is to be found."

Diseases of the hymen.—I approach this part of my subject, gentlemen, with a good deal of hesitation, from the fact that I have been unable to meet with any systematic arrangement of the diseased states affecting this structure, and of some I can even find no account in such works as I have been able to examine. I do not say that none such exist, but in the short time allotted by you for the preparation of this essay, I have not been able to find them. As examples of the diseases which will be mentioned, I will detail cases occurring in the practice of physicians of this city which have never yet been published, and which it gives me great pleasure to record.

The diseases of the hymen may be enumerated as,

1*st.*—*Fibroid, or Cartilaginous degeneration.*
2*d.*—*Ossification.*
3*d.*—*Aphthous ulceration.*
4*th.*—*Inflammatory ulceration.*
5*th.*—*Irritability accompanied by spasm.*
6*th.*—*An imperforate condition.*

The first of these states, fibroid degeneration, is by no means uncommon, and frequent mention of it will be found in works on obstetrics. It was probably due to it that, as Dr. Tucker reports, a hymen in his practice resisted several powerful uterine efforts which forced a child's head against it, and that Ambrose Paré was called upon to cut one which resembled parchment in a woman who had borne a child.

The courtesy of Dr. Valentine Mott enables one also to offer the following examples of it. Dr. Mott informs me that he has met with four cases in which the hymen had undergone this degeneration; in two he discovered it while making a digital examination of carcinoma uteri; in both it was hard, strong, and unyielding, so that the finger could be hooked against it and pulled with some force without any sign of yielding. The third case occurred in a lady in good society, who went to consult him, because she was entirely unable to perform the act of copulation, although she had been married for a length of time. Upon examination, he found the hymen so strong and resisting that it would have been impossible for the male organ to have broken it. Under these circumstances, he resorted to the bistoury, and making an incision through the obstructing veil, rendered the act at once practicable.

The fourth case (which is now under treatment by him) is that of an unmarried female, who is suffering from a fibrous growth, from the uterus, which hangs into the upper part of the vagina. The hymen "resembles in strength and resistance the fascia lata of the thigh," and shutting up the greater part of the mouth of the vaginal passage precludes all possibility of operating, or even of fully examining the morbid structure above. It is probable that, in this case, section will have to be performed.

The second of the diseases enumerated, ossification or calcific degeneration, is exceedingly rare, and after careful search I am unable to find a recorded case of it. The following very interesting instance of it, for which I have to thank Dr. William H. Van Buren, will substantiate the fact of its occurrence. While going around the wards of one of the hospitals of

Rouen, Dr. Van Buren was shown by M. Flaubert, the surgeon in attendance, a case of fractured thigh in an old French woman, probably about seventy-five years of age. In a vaginal examination called for by some uterine trouble, the hymen had been discovered in a complete state of ossification. This was verified by Dr. Van Buren's examination; the membrane gave to the touch the ordinary sensation of calcification, and when struck by a probe, it distinctly gave the sound which an ossific patch on the aorta yields to a metallic instrument which strikes it.

The third form of disease, aphthous ulceration, may affect this, as it may any other mucous surface, and in itself is of little importance. Sometimes, however, it produces obstinate vaginal leucorrhœa, more especially in young children, which may be readily removed if attention is directed to this as its cause. In one case which has fallen under my notice, marital intercourse appeared for some time delayed by these little abrasions which rendered the parts exceedingly sensitive; they were not, however, confined to the hymen, but existed on the labia likewise.

The fourth disease of our classification is one which has been ably described by Mr. Percival, in the "Medical Ethics;" Mr. Kinder Wood, in the "Medico-Chirurgical Transactions," and Mr. Lawrence, in his "Surgical Lectures;" each differing somewhat from the other in his description of what appears to be very much the same affection. The disease is characterized by swelling of the organs of generation, which assume a dusky red color, and soon ulcerate. This action is not confined to the hymen, but it suffers in company with the other organs of generation. My reason for drawing attention to it here is, that its ravages have been repeatedly mistaken for the results of rape; and in an inquiry instituted to settle the point, the ruptured state in which it was found might be erroneously regarded as confirmative of that charge, unless the physician was on his guard against this source of error.

The medical examiner who gives evidence in a case of rape, should keep this fact clearly before his mind, for death is the frequent result of the disease, the relatives of the female are convinced of the justice of their cause, and a case pressed, under such circumstances, might, by very slight corroborative testimony from him, turn against an innocent man. From a note received by me upon this subject from Dr. John W. Francis, I extract the following: "In one instance, the female, aged near twelve years, had lost the membrane by vicious practices; in another case, aged thirteen years, ulcerative action had occurred in the private organs, and the absence of the hymen was thus accounted for. I have repeatedly known this disordered action to occur in those parts, in young subjects, at a period of life earlier than six years; the individuals having labored under that sad constitutional infirmity which years ago prevailed among the poor inmates of our old almshouse." He has known "two cases of alleged rape; one on the body of a child five years of age, the other on that of a girl eight years old, which were quashed, from the medical testimony advanced being grounded on the circumstances of the genital organs being affected with an affection not unlike that of the character described by Lawrence."

A striking case is mentioned by Dr. Percival, in which a girl, aged four years, after having slept with a boy aged fourteen, for two or three nights, showed the evidences of severe inflammation in the external organs of generation, and declared that her bed-fellow had hurt her during the night. The girl died, and the boy was arraigned for trial on the charge of rape and murder, and would probably have been executed, had not several similar cases occurred in the neighborhood just after, which enlightened the medical examiners, who had testified against him, as to the true nature of the case.

The name, "irritability," which I have applied to the fifth of the disorders of the hymen, is not satisfactory to me; and yet I know of no other which has yet been applied to it, or which would characterize it better. This condition seems to consist in a peculiarly irritable or hyperæsthetic state of the nerves supplying the hymen, which, by reflex action, causes spasm in the elastic tissue surrounding it, as thought by Dr. Tyler Smith, or in the sphincter vaginæ, as thought by Dr. Marion Sims. It comes on sometimes soon after marriage, the hymen being entirely ruptured, or only partially so, and either interferes with, or prevents coition for a period varying in time according to circumstances. From such information as I have been able to gather concerning this peculiar condition, it is by no means rare. Dr. Tyler Smith, in his excellent work on obstetrics, alludes to it in these words: "There is a considerable amount of contractile tissue in the situation of the carunculæ, and in some cases the irritation and spasmodic painful contraction at this point is so great as to render intercourse difficult or impossible long after marriage." Already, I have been able to collect six cases of it, the histories of some of which will be given below.

As regards its pathology, I have been able to find nothing published. It appears to me to be due to a morbid condition of the nerves supplying the hymen consequent upon mechanical violence done to that structure, as, for instance, to partial or complete rupture during coit. And reasoning from analogy, I think that a perfectly logical conclusion may be drawn, that the morbid action may arise from that state of the nerves described by Romberg as "hyperæsthesia," or as Dickson expresses it: "A plus state of excitability or susceptibility." This, we know, may exist with very slight mechanical irritation, or from very trifling disease; thus it is that we see severe spasm occur in the small bronchial tubes from inhalation of the aroma of certain kinds of grass, the powder of ipecacuanha, etc., and that we meet with spasmodic action at the neck of the bladder, from the injection into the urethra of very mild astringent solutions. That a great morbid influence may be exerted upon the nerves of a diseased part by a very insignificant malady, is readily proved by reference to the severe and tormenting neuralgic pains which sometimes attack the seat of an old eruption of herpes zoster, and which sometimes continue for years after the cutaneous trouble has entirely disappeared. Sometimes we see this result upon the hymen continue long after marriage, accompanied with a low grade of inflammatory action established in the carunculæ myrtiformes, which may degenerate into warty growths, cause obstinate leucorrhœa, and require excision, as stated by Denman, Velpeau, and others. At other times there are no evidences of inflammation, but the morbid action seems to have left its impress on the nerves, and spasm lasts for years. The following cases, for the notes of which I am indebted to the kindness of Dr. J. Marion Sims, will illustrate the remarks which I have just made.

"Mrs. H., aged twenty-one years, had been married one year, during which period sexual congress had been perfectly impracticable, the effort being attended with such excruciating agony, as to forbid perseverance. The introduction of the finger produced the most intense suffering, with general nervous agitation, involuntary weeping, and even screaming. As soon as the finger was passed in, violent spasm would occur in the sphincter vagina, which could be felt like a hard tendon; and as it was withdrawn, immediate and perfect cessation of suffering would occur. Upon a minute examination, it was discovered that the hymen itself was the seat of this excessive irritability, and that the slightest touch was sometimes more intolerable than firm pressure. Pressure on the verge of the anus, the perineum, the labia, the meatus urinarius, the clitoris, and the mons, gave no unusual manifestations; but the moment that the hymen was touched, all the above symptoms were reproduced, and with this peculiarity, viz.: touching the vaginal surface of the hymen gave no pain, but the instant the probe was brought in contact with any point in the line or fold between the hymen and the labia, the suffering was excruciating.

"I felt satisfied that this spasmodic stricture of the sphincter was due to a morbid sensibility of the hymen, and its proper nerve expansion at the os externum; and that the two conditions naturally reacted, as we see in fissure of the anus. Here the fissure when touched, or irritated in any way, produces a rigid spasm of the anal sphincter, and although the fissure is the original disease, it can be cured only by the division of the muscle, which (as a rule) should be made through the fissured chasm; thus, severing not only muscular fibre, mucous membrane and cellular tissue, but also diseased nervous filaments, that are exposed in the fissured surface. So in this *vagino spasmus* (if I may be allowed to coin a name), we have the same indications, viz., to divide the tissues of the part implicated, and also the muscle.

"As the case was one for observation, Dr. Emmet suggested that I should divide the hymen on both sides. This was accordingly done, cutting carefully through it and the vaginal mucous membrane on each side, for the distance of an inch, but not going through the sphincter. The patient was under the influence of chloroform.

"An examination, made a few days after this, showed that her condition was the same as before.

"A month after, another operation was performed, cutting laterally on each side downwards and backwards. Hemorrhage was profuse, requiring the use of a tampon, which was removed on the third day. It produced great suffering. On the 5th day a violent arterial hemorrhage occurred, which it was difficult to control on account of the extreme sensibility of the parts. I sent for Dr. Emmet to give chloroform, but fortunately succeeded in arresting it before his arrival. This tampon was removed in three days, but no examination was made for about three weeks, when it was ascertained that two fingers could be easily passed into the vagina, and that, without exciting any undue suffering. This partial success leads me to believe that another, and more perfect operation, will make her physically competent to perform all the duties of the marital relation.

"I have seen," Dr. Sims goes on to say, "two other cases like this. One in a lady, now married twenty-seven years, in whom it is almost impossible to pass the finger through the sphincter vagina. Indeed, the first attempt was an entire failure, and it was only after etherization, that I could ascertain that the vagina and its outlet were normal; the closure being entirely spasmodic. During the twenty-seven years passed by this lady in married life, sexual congress has never been effected. The hymen is still perfect.

"The other case is in a lady, of twenty-five years of age, who has been married four years, during which time the act of coition has been impracticable. She had a sanguineous, mucous tubercle growing from the meatus urinarius, and I supposed that all her troubles sprung from this, as it was very sensitive to the touch; but its excision brought no relief, and upon a minute examination, I found the hymeneal condition precisely as described in the first case."

We come now to the sixth and last of the abnormal conditions to which the hymen is liable, and upon which, as it is fully described in all modern works upon the diseases of females, I will speak at very short length. Imperforate hymen is a congenital condition, accompanied by so marked and such painful symptoms, that it could not fail to have arrested the attention of very old observers. The Greeks provided for those who suffered from it a special name, they being called "*ατρήτὰι*" while the Latins styled them "clausæ" or "velatæ," and the Italians "coperchiati." Almost all the old writers alluded to this obturator membrane sometimes found in the vagina, and Ruysch advises its treatment by incision in these words: "Menses a membrana vulvam claudente suppressi, per-que hujus incisionem evacuati."

In these cases the uterus often enlarges under the distending force of retained fluid, the mammæ sympathize with its disturbance, vomiting comes on, and a confident diagnosis of pregnancy may be made; the erring physician adding the severest of pangs to the already unfortunate and suffering woman. Such cases are recorded by Frank, Montgomery, Denman, Smellie and others, and in one instance Dr. Macauley was not only deceived thus far, but mistaking the arched and bulging hymen for the presenting part of a child, and the expulsive pains caused by uterine distension for the throes of parturition, pronounced the patient to be in labor. The fluid discharged by incision of the membrane in such cases has amounted to quarts, and by one authority two gallons, it is averred, were thus retained.

The treatment of imperforate hymen suggests itself at once, namely, incision through the obstructing membrane.

As Dr. Rigby, in his work on diseases of women, says, "the operation is simple, and usually performed without difficulty," but he makes no mention of the serious results which sometimes follow so easy a procedure. Dangerous constitutional disturbance, peritonitis and even death have been known to follow a small crucial incision through the hymen under such circumstances, and any one about to perform the operation would do well to guard himself against censure by informing the friends of the patient of this fact before undertaking the operation. Denman says, "I once saw an instance of inflammation of the peritoneum being immediately produced after the operation, of which the patient died, as in the true puerperal fever, and no other reason could be assigned for the disease. Dr. Ramsbotham has reported five fatal cases from the same slight cause. It is difficult to account for these grave results after so slight a surgical interference; the only explanation which I can offer for them is this. When the operation is called for, the uterus and fallopian tubes are much distended, and their mucous surfaces disordered by lengthy contact with the contained blood, and when atmospheric influences are for the first time exerted upon them the ordinary symptoms of inflammation of these parts are developed.

The following case, the notes of which the politeness of Dr. Hubbard, of this city, enables me to present to you, will illustrate these remarks.

"Miss A., of robust constitution and sanguine temperament, at thirteen and a half years of age, had symptoms of menstruation. These symptoms continued at regular monthly periods for something like one year, when I was sent for to relieve her of retention of urine. On introducing the catheter I discovered that there was a tumor of soft character pressing forward the hymen; that the abdomen was somewhat distended and tender, and the hymen imperforate.

I proposed an operation, but consent to it was not obtained. After suffering several times from retention of urine, produced by accumulation of menstrual fluid pent up in the vagina, and as often relieved by the catheter, the patient submitted to an operation.

Two years had now elapsed since the first symptoms of menstruation. The abdomen was found distended to the size of a first pregnancy at the seventh month of gestation, and the hymen tense, and pushed forward between the labia. Her general health had suffered to some extent, her countenance pale, and appetite not good. A crucial incision of one fourth of an inch was made through the hymen, through which flowed slowly a fluid of dark, pitchy appearance, without odor, of the consistence of liquid tar. After this a bandage was applied, and the patient ordered to be kept in a recumbent position. The discharge continued for three days, when it was supposed by the mother to have amounted to four quarts.

On the third day, the patient began to have fever and great tenderness of the abdomen, and for some days her condition was thought alarming. But by free leeching, and the use of fomentations, the inflammatory action was subdued, and in two weeks she entirely recovered.

Causes of the persistence of the hymen after copulation and conception.—It may not be unprofitable in this connection to investigate the causes of the singular persistence of the hymen after copulation, conception, and even as we have seen, after parturition. They may be thus enumerated:

1. *Degeneration of its structure.*
2. *Extreme elasticity and distensibility.*
3. *A small male organ and a hymen with a large fenestra.*
4. *The existence of vaginal or uterine discharges.*

1. Of the first little need be said; its mode of action is evident, and I have already given cases where section of the abnormally strong membrane had to be performed to permit the marital act.

2. It is a well-known fact, that in certain cases the hymen is very thin, and easily stretches out against the vaginal walls under the influence of pressure of the virile organ. The distending force being withdrawn, its elasticity enables it again to recover its former position, from which it again retreats on a repetition of the attack upon it. It is undoubtedly to this variety that is due the fact that even repeated parturition does not rupture it, as already quoted from the writings of Dr. Meigs.

3. Regarding the third cause, I would merely call to your minds the fact that we sometimes meet with the hymen so largely fenestrated as to permit us to pass a small speculum into the vagina, and examine the os uteri above. In the same way, a small male organ has been known to pass and cast the seminal fluid on productive soil. Although the act of copulation be in this case often repeated, the rupture of the hymen may be left for the presenting part of the product of conception to perform.

4. The relaxing influence exerted upon this membrane by vaginal or uterine discharges has long been known. Mahon, and Foderé, and most of the writers upon legal medicine, make mention of it. Ruysch has said that if coit take place just after menstruation, it is often not ruptured, and Bartholinus even goes so far as to give to girls about to marry this advice: "But if her courses flow or have flowed a little before, the yard is easily admitted by reason of relaxation of those parts, whence there is little or no pain and little or no flux of blood. And therefore maids should not be married at

that season lest the bridegroom come to suspect the virginity of his bride."

The carunculæ myrtiformes.—Our subject would be incomplete without a mention of the carunculæ myrtiformes, the little fleshy bodies about the size of myrtle leaves which exist in the track of the hymen after its rupture. Some diversity of opinion has existed, and still exists, as to the source of these little bodies. Old Severinus Pinæus, quoted by one of his contemporaries as "a most expert surgeon of Paris who hath wrote an whole book of the notes of virginity, not unprofitable to be read," originated the idea that the carunculæ myrtiformes were so many points of attachment for a membrane which, running off from them, makes the hymen, and this membrane, being ruptured, leaves them visible.

MM. Rigaud, Tolberg, Belloc, and others of more modern times, have regarded them as simple reduplications of the vaginal mucous membrane which exist before the rupture of the hymen; but the weight of opinion at the present time is very decidedly in favor of their being the débris of the broken hymen, which gradually shrivel and occupy an unimportant position in the vaginal passage. The number of these bodies cannot be fixed, varying according to circumstances from two to six, or perhaps more. Two of these little eminences, as thought by some physiologists, appertain to the medium columns of the vagina; they are a little anterior to those formed by rupture of the hymen.

The carunculæ are liable to inflammatory action, as already stated, and sometimes degenerate, become warty in appearance, cause an obstinate leucorrhœal discharge, and necessitate excision, as advised by Denman, and practised by Velpeau.

But time presses, and we must conclude. Before leaving the subject, however, gentlemen, let us for a moment reflect upon the singular importance which has from the earliest ages been attached to the existence of a little fold of mucous membrane, the presence of which is, as a general rule, of as little value as a proof of chastity, as its absence is of the contrary. When we bear in mind that at various periods of the world's history the life, the honor, and the holiest affections of the female heart have been jeopardized by a blind reliance in it, how plainly can we see the important duties which are owed to society by that profession whose function it is to enlighten and instruct it upon points like these! How strongly and painfully does it impress upon us the fearful responsibility of our calling when we see such gigantic interests, the guardians of which we are, revolving around so insignificant a pivot!

Art. IV.—*The High Operation for Stone in the Bladder, performed upon an Original Plan, with Essential Modifications and Improvements.* By Henry Stuart Hewit, M.D., formerly of the U. S. Army, and late of San Francisco.

E. S., a pale slender youth, aged 19, of English birth and parentage, presented himself in the month of December last, with all the rational signs of stone in the bladder. He referred the origin of the difficulty to an accidental injury experienced six years previously, which occasioned considerable hemorrhage per urethram, but for which he received no medical treatment. The present acute symptoms began to be troublesome about three years ago, and their increasing severity, with the consequent constitutional irritation and derangement, at last compelled him to forego his usual occupation, and seek surgical assistance.

The first attempt at physical investigation was foiled by the sensitiveness of the urethra and neck of the bladder. At the next interview, with the assistance of Dr. J. W. S. Gouley, chloroform was given, a sound introduced, and the existence of the suspected calculus indubitably ascertained. Another examination was made soon afterwards, in consultation with Prof. Van Buren, who indicated the size and shape of the stone with a precision exactly verified upon its subsequent extraction.

Mature deliberation, and careful consultation of authorities both in the literature of lithotomy, and among the eminent surgeons of this city, together with frequent practical rehearsals, determined the writer to select the high operation, which, it is proper to remark, was suggested in the first instance by his esteemed friend, Dr. Gouley. It was put in execution with the following modifications, on the 5th of January, in presence of Drs. Mott, Batchelder, Van Buren, Stephen Smith, Markoe, J. J. Crane, G. A. Peters, Geo. T. Elliot, Gouley, Carew, Busteed, and Phelps.

The patient, profoundly narcotized with chloroform, under the able superintendence of Dr. Elliot, having been laid upon a piano, selected as an operating table for its height and solidity, the steps of the proposed procedure, with the motives for their adoption, were briefly recapitulated to the medical gentlemen present.

Operation.—The bladder was emptied by a silver catheter, through which it was injected with tepid water to nearly its capacity. The ordinary abdominal section, commencing midway between the umbilicus and symphysis pubis, terminating at the superior border of the pubes, and completed through the linea alba, revealed the distended organ swelling into the space between the recti muscles. The water, having accomplished its objects, viz.: elevation of the vesical reflection of peritoneum and ease of identification, was permitted to escape, and the flaccid viscus raised upon the point of the retained catheter was secured by a stout suture, passed through its coats and confided to an assistant, for the double purpose of holding it in position, and retaining it under complete control.

The place of incision being selected, and the absence of peritoneum certified, the bladder was pierced, the fore finger of the left hand of the operator introduced, and the division completed upon it, as a director, longitudinally downwards to the requisite extent; a slender forceps followed the knife, and the stone was gently rolled into its grasp with the point of the finger, and extracted with the utmost ease. The incision in the bladder was immediately closed by four points of interrupted silk suture, inserted with the aid of a sharp artery-needle, and the supplementary suture of support withdrawn. Owing to the admission of air, the bladder manifested a tendency to bulge between the recti muscles. To obviate this, and to prevent possible strangulation, the sutures used in closing the external wound were, at the suggestion of Prof. Van Buren, carried deeply through the substance of these muscles, and the inflated bladder thus, on bringing the edges of the incision together, pressed back into its natural position, the long ends of the cystic sutures, and of the ligatures of two small arterial branches having been properly distinguished, and brought out of the lower end of the opening. Lastly, a gum elastic catheter was passed and secured by straps of adhesive plaster carried around its free extremity, and laid upon the sides, and superior and inferior surfaces of the penis. After the patient had been removed to bed, a large sponge, as a receptaculum urinæ, was attached to the end of the catheter, and placed upon an oil silk protector between the thighs. The sponge was wet within an hour, and perfect drainage was in this manner maintained, and infiltration absolutely prevented.

The operation was followed by a high degree of reaction and severe irritation.

These symptoms were, in the opinion of a surgeon of the highest authority, and ample experience in lithotomy, more severe than those which follow favorable cases of the lateral operation. Vascular excitement, and nervous irritability were, however, effectually controlled by the veratrum viride and Magendie's solution, and on the third day what may be called *resolution of shock* took place, when the countenance resumed its natural expression, the voice recovered its ordinary tone, and the pulse fell to the normal standard. As soon as this favorable change manifested itself, the patient was put upon superphosphate of iron and nutritious diet, with wine, and his bed and body linen ordered to be changed daily.

On the *fifth day*, the bladder gave evidence of integrity, by expelling its contents independently, and the catheter was accordingly removed. The patient was directed to pass his water frequently, and to send for assistance in the event of any difficulty. Unfortunately after passing water once or twice, he became nervous, and refused to repeat the effort. He concealed his condition until the accumulated fluid ruptured the new adhesions, and urine flowed through the track of the sutures and ligatures, already rendered tubular and lined with pus. Infiltration could not take place under these circumstances, and the accident was of no moment, excepting that it marred the beauty of the case. The fistula was not interfered with, and it closed on the twenty-fourth day from the operation, and the nineteenth from its occurrence.

On the tenth day, the sutures of the bladder and the ligatures came away together. The loops of two of the sutures had dissolved their continuity, and two remained entire. On the eleventh day, the patient began to sit up, and continued to pass most of his time in his arm-chair. On the twenty-first day he walked out, and is at present able to go about, and attend to his affairs. The external wound healed partly by the first intention and partly by granulation. The urine was bloody for four days succeeding the operation, and very highly ammoniacal for several days more. It became, before the conclusion of the treatment, healthy and natural with the exception of containing a very small quantity of pus.

Since performing this operation, the writer has read the paper upon epicystotomy, in the NEW YORK JOURNAL OF MEDICINE for January, 1858, by Dr. Noeggerath, and he takes this opportunity to express his admiration for the eminent surgical ability displayed in the management of the desperate case therein described, and his sympathy with the bold opinion uttered in favor of the high operation.

It is not necessary to enter into a comparison of the high operation, with the modifications described in the present case, and the lateral method. The writer believes this to be the first case of high operation performed by *selection* in America.

If the operation, with the modifications advocated, possess merit, it will be promptly recognized by practical surgeons. With these brief remarks, the foregoing case is respectfully submitted to the criticism and judgment of the profession.

80 East 29th st., Feb. 1st.

NOTE.—The calculus was of the size of an English walnut. Its analysis and description will be furnished hereafter.

ART. V.—*On the Respiratory Sounds.**—By J. HERZKA, M.D.

IN the "Treatise on Percussion and Auscultation, by Dr. Joseph Skoda, 5th edition, Vienna, 1854," this eminent clinical professor has, with complete success, controverted all those theories on the subject which, up to that time, have been set up in France and Germany, different from his own. Since then Professor Wintrich, of Erlangen, has published a very elaborate work on "Diseases of the Respiratory Organs," in which the Vienna professor is criticised anew, and new theories are established. At the present day, therefore, it only remains to be decided which of these two authors, if either, is correct, or how far the one or the other, or both, are in error.

It is the purpose of the following pages to show that, as far as the respiratory sounds are concerned, the teachings of both Skoda and Wintrich are unsound, and to endeavor to replace them by others less speculative and artificial, and more in keeping with the plain and established principles of natural philosophy.

The first point to be settled in connection with the respiratory sounds is, what opportunities are there in the respiratory organs for the production of any of them? Skoda and Wintrich, with all other writers on this subject, contend that the respiratory sounds result from friction of the air against the walls of the air-passages from the nostrils and the orifice of the mouth, down to the very air-cells.

Skoda says (p. 59), "It is well known that the air, during respiration, produces a sound in the nose and in the mouth. By application of the stethoscope one can become convinced that also in the larynx and in the trachea inspiration and expiration is accompanied by sounds. And there is, therefore, good ground for the supposition that during respiration, sounds are produced through the whole of the air-passages of the lungs." The same writer says (p. 109), "I explain, like Laennec, the vesicular respiration by the friction of the air against the walls of the minute bronchial tubes and air-cells, whose contractive power it has to overcome. From the circumstance that the penetrating air has to overcome the resistance of the air-cells, their contractility, and by the exit of the air in the normal condition of the lungs it meets no such resistance, it is to be explained that the respiratory sound in the air-cells is stronger in inspiration than in expiration. In the larger bronchial tubes, particularly in the trachea and larynx, things are different. The air has there no resistance to overcome during inspiration, on the contrary, it becomes rarified; but during expiration, where it is forced from a larger space—from the air-cells—into a smaller one, the air is compressed in the larger bronchial tubes, and particularly in the larynx. In the larynx, in the trachea and in the larger bronchial tubes, therefore, as a general rule, the expiratory sound is stronger than the inspiration." Again (p. 110, note), "I am of the opinion that the sound, which becomes audible in consequence of the friction between the air and the bronchial walls, originates in the air. The coexisting vibration of the tissue of the lungs does not make a sound."

---

* The respiratory sounds proper are those under discussion, and even of these the *amphoric resonance* and the metallic tinkling will be excluded here.

Wintrich says (p. 154), "If we hear a person breathe strongly, the inspiratory and expiratory sound instantly makes the impression of friction. In ausculting over the larynx, the trachea, and over the superficially located main bronchial tubes, one hears, during inspiration and expiration, a friction sound." "This inspiratory sound on the periphery of the lungs, where no bronchial tubes lay superficially, the writers call the vesicular respiratory sound, and without hardly an exception, accept it to be a friction sound."—*Wintr.* p. 155. "There is no want of opportunity for friction during inspiration. Up in the mouth there are frictions against the parts of the palate, the throat, the epiglottis and glottis, the vocal chords, the cartilage rings of the trachea, and so on."

This, although universal opinion as to the cause of the respiratory sounds, I cannot indorse, nor can I accept such an ubiquity of their origin, for negative as well as positive reasons. My negative reasons are, that there is not the slightest proof to warrant such an opinion.

Skoda makes an attempt to prove this reasoning correct in the quotation above, as follows: because respiration produces a sound in the nose and in the mouth, in the larynx and in the trachea, therefore "*there is good ground for the supposition*" that sounds are produced through the whole of the air-passages.

Now, is this to be taken as an argument in favor of the friction theory? Because there are sounds produced in the nose, in the mouth, in the larynx and in the trachea, is it to be considered good ground for the supposition that such is the case all through the air-passages? In discharging a gun, we know that the detonation takes place first in the percussion cap and next at the bottom of the barrel, where the powder is placed, the powder chamber, and perhaps also at the muzzle; but is that good ground for the supposition that all along the barrel sounds are produced, and that these sounds are friction sounds, and that the detonation, too, is a friction sound? Or is the explosive sound of a champagne bottle the effect of friction all along the neck of the bottle? These questions can be diversified ad infinitum. At last, if respiratory sounds are produced in the nose and in the mouth, does that prove that they are produced throughout the nose and month? How much, then, is left of what Skoda calls *good ground* for his supposition? I will hereafter take occasion to show that during placid respiration no sound is produced in the nose or in the mouth.

Wintrich forms his opinion more easily; he simply states that the respiratory sound "*created the impression of friction*," and this impression forms the basis of his conclusions.

Is the generating of sounds by the friction of air against the walls of tubes, through which it circulates, so much a matter of course as to require no further demonstration? I think not. That a certain amount of pressure against the parietes of air-conveying tubes takes place, cannot be questioned; but it will be hard to prove that a friction sound is thus ever produced, although our impression might lead us to presume it. Would not our impression equally make us believe that the voice and the cough are produced in the mouth, and perhaps by friction? And yet of what importance is this impression? Other positive objections to the friction axiom I reserve for a more convenient place.

My opinion, therefore, about the respiratory sounds is, that they are the effect of a shock between two portions of aëriform substances of different density at their point of meeting, to establish an equilibrium. We know that if a comparatively small quantity of gunpowder, or any other explosive substance, is suddenly transformed into gas, a sound is produced; because the newly created gas, having a greater density, expands with force to gain the equilibrium of the surrounding atmosphere. Or, if a certain quantity of a mixture of hydrogen and oxygen gas is suddenly transformed into a drop of water, it will create a vacuum, which the surrounding atmosphere will occupy with a rush, producing a sound. Or, if an aëriform substance, under a higher or lower pressure than the atmosphere, is confined within a certain space, and a sudden opening is made, so that the air from within can rush out, or the atmosphere from without rush in, the shock between the two will produce a sound at the very point of their first contact, at the opening.

The strength and character, with all the other particulars, of such sounds depend on the amount of pressure of the one element against the other; on the narrowness of the opening at which they meet; on the shape of such aperture, and on the elasticity of its rim, against which the expanding air strikes. Such elasticity being again determined by the material, the bulk and form of the rim.

With a little sober reasoning, therefore, we will gain something better than a mere impression—we shall become convinced that the respiratory sounds, like the vocal sounds and the cough, are the offspring of the sound-generating contact of two portions of air of different condensation.

During inspiration the greater condensation is with the air in the atmosphere, and during expiration with the air in the lungs. The voice and the cough constitute merely stronger expiratory sounds, with no other acoustic parentage. The local origin of the respiratory sounds can be none other than such border orifices between the two differently condensed portions of air: *the rima glottidis, the bifurcation of the trachea, and every further point, where a smaller bronchial tube branches off from a larger one.*

I will illustrate this by the following analysis of the respiratory acts. During inspiration, we enlarge the cavity of the thorax through muscular action, so that a vacuum is formed; consequently, the air in the lungs expands to fill it out; by such expansion the equilibrium, with the atmosphere, is lost, and to restore it the atmospheric air rushes in, first through the rima glottidis (sound No. 1), after the reëstablishment of the equilibrium between the atmospheric air and the air in the whole tract of the trachea, then the equilibrium is again disturbed between the air in the trachea, and the still attenuated air in the bronchus. A second rush takes place at the bifurcation from the trachea into the bronchus (sound No. 2), and so on at all the other bronchial embouchures, till the inspiratory act is completed.

During expiration, the same takes place in an inverse order. The air-cells contract, the air within them becomes condensed, and therefore rushes out through communicating orifices into the adjoining bronchial tubes; in consequence of such influx the air in these tubes becomes condensed, and again a portion must rush out into the next order of bronchial tubes, and so on till the whole of the superfluous air is discharged through the rima glottidis, and the expiratory act is completed.

But let us proceed a step further, and inquire whether a sound is actually produced between the so-called cells and the most minute bronchial tubes. If I ignite a minute grain of gunpowder, the effect even in the closest proximity will be hardly audible; if the atmospheric air rushes into a very small vacuum, the sound will disappear at a certain degree of minuteness of such vacuum; and *vice versâ*, if a very small quantity of condensed air is allowed to escape. So it may be with the so called air-cells and the minutest tubes. This, then, is the next point to be settled: *Are such sounds as I have* *described incited in the periphery of the lungs, that is, between the air-cells and the minute bronchial tubes?*

Skoda, Wintrich, and others maintain, that the inspiratory sound, which we hear on auscultation over the thorax of a healthy person (the vesicular respiration), is generated in the air-cells by friction. They further contend, that during expiration the gradual contraction of the cells precludes any perceptible resistance to the escape of the air, and at the same time any formation of sound; but that in the larynx, trachea, and the larger bronchi, the expiratory sound is stronger, because the expiratory air becomes compressed in these comparatively narrow passages. Such discrimination I pronounce sophistical. In the larynx, the trachea, and the larger bronchi, the air is propelled solely by the *vis à tergo* from the moving air in the cells through their contraction. The more gradual such contraction, the more gradual must be the propulsion through the whole mass of air, and the more gradual the ultimate discharge through the rima glottidis, and the less opportunity for compression of the air in the larynx, etc. And, if such gradual contraction of the air-cells is the cause of the total absence, or weakness of the expiratory sounds, compared with the inspiration in these parts, it ought to have the same reducing effect on the expiratory sound in the larynx, trachea, etc.

I therefore conclude, that the sounds over the peripheric parts of the lungs do not originate there, but at the orifices of the somewhat larger bronchial tubes, and for the greater intensity, or sometimes, the sole audible existence of the inspiratory sound over these parts, I account in the following manner: On all points where in healthy lungs a sound is formed during respiration, it must be more intensely incited at expiration. Where, through ascultation we find the reverse, it is because there are weakening influences, not in the production of the sound, but in its propagation. So that the expiratory sound, stronger at its origin and native locality, may reach the stethoscope in a more attenuated condition, and be thus construed into an originally weaker sound.

I will first show that all the respiratory sounds in healthy lungs must in their *status nascens*, be stronger at expiration than at inspiration.

Suppose $A =$ pressure or density of the atmosphere, or of the air in the lungs after completed inspiration or expiration.

$v =$ volume of the lungs after expiration.

$V =$ volume of the lungs after completed inspiration.

d = density of the air in the lungs after attenuation through inspiratory expansion.
D = density of air in the lungs through condensation at expiratory contraction.
p = pressure of atmosphere on the attenuated air in the lungs.
P = pressure of the condensed air in the lungs on the atmosphere; then

$$d : A = v : V; \text{ and } d = \frac{Av}{V}; \text{ and}$$

$$D : A = V : v; \text{ and } D = \frac{AV}{v}$$

$$p = A - d; = A - \frac{Av}{V}; = \frac{AV - Av}{V}; = V - v\,\frac{(A)}{V} \text{ and}$$

$$P = D - A; = \frac{AV}{v} - A; = \frac{AV - Av}{v} = \frac{A}{v}(V - v)$$

$$P : p = V - v\,\frac{(A)}{v} : V - v\,\frac{(A)}{V}; = \frac{A}{v} : \frac{A}{V} =$$

$$= \frac{1}{v} : \frac{1}{V}; = V : v; \text{ and}$$

$$P = \frac{pV}{v}; \text{ and if } V = xv \text{ then}$$

$P = \frac{pxv\ ;}{v} = xp$; that is, if the capacity of the inflated lungs at inspiration is, 2, 3, 4, x times the capacity of the contracted lungs after expiration, then the propelling power by which the air is forced out of the lungs during expiration, is 2, 3, 4, x times the force by which, during inspiration, the air is drawn in.

Let us suppose, for instance, that the lungs, during inspiration, expand to twice their previous size, consequently the air within must be rarefied to the half of its previous density, that is, to half of the atmospheric density, and the atmospheric air must press on it with the weight of half a barometer. If then, after the restoration of the equilibrium at completed inspiration, the lungs again contract to their former capacity, the air within must attain twice the condensation it had before such contraction, that is, twice the condensation of the atmosphere, and the air will consequently be forced out by the weight of a whole barometer.

This deduction will answer more satisfactorily than has been hitherto tried, for the stronger auscultatory perception of the expiratory sound over the larynx, trachea, and larger bronchial tubes in the normal condition of the lungs, compared with the inspiration.

And, why is not such the case over the tissue of the lungs? With this question is coupled another one: why is even the inspiratory sound over the parenchyma of the lungs, though stronger than the expiration, still so much weaker and softer than the corresponding sound over the larynx, trachea and the larger bronchi? In one word, why is the vesicular respiratory sound so much weaker and softer than the tracheal and bronchial sound. This constitutes another fundamental point to be settled.

If on fresh calf's lungs, through tubes of different sizes, diversified sounds are excited by an assistant in the trachea, or bronchi, by blowing in the direction towards the lungs, or through a hole made at the bifurcation by blowing towards the larynx; or if that is done at the cut opening of the pulmonary artery; or if by dissection one of the smaller or smallest bronchial tubes is laid bare, cut open and a tube of convenient size introduced, through which an assistant may blow in either direction, towards the larynx or towards the air cells; or if by a transverse cut a piece of the lungs is removed, and bronchial and arterial openings exposed for the same experiment; I can hear distinctly, over every part of both lungs, the sound such as it issues from the tube of the assistant, with its distinctive character and very strong. The stronger the assistant blows, the more distinctly the sound is heard in every part, provided the lungs are not forced to respiratory movements. But if the tube used at the experiment is fixed airtight in the trachea or bronchus, and inflation and collapse are alternately effected, then the stronger this is done, the less will the original sound as it leaves the opening of the instrument be heard over the lungs. On inspiration, I hear over the lungs a rattling sound, crepitation produced by the air rising in bubbles through the mucus which dead lungs always contain; and at the collapse a very weak soft sound without a distinct character (perhaps a very gentle aspiration) is all that is to be heard.

Paradoxical as these results may seem at first sight, still there can be nothing more in accordance, not only with acoustic principles, but with well-known facts of every day's occurrence. If the assistant emits only a sound into the cavity of the air passages, this sound spreads in the stagnant air through all the bronchial avenues to the air-cells and through them, which prove to be very permeable by the sound, in the stethoscope. In a like manner this takes place if the sound is introduced through the pulmonary artery, whose minutest ramifications are possessed of the same permeability. But if simultaneously with the sound, a current of air is made to pass through the bronchial tubes, such current will exercise a concentrating power over the sound, and will thus prevent it from passing freely through the walls of the minutest bronchi and cells. And if the sound which is to pass through the air passages is met by a current coming out of such passages, then a very small portion only of the sound will find its way against the current, and of this fraction, a mere sub-fraction, will traverse the tissue to enter the stethoscope.

If a person speaks in the open air when there is a calm, then the sound spreads with uniformity in all directions, and at equal distances will be heard all around with equal distinctness. As soon as the air is disturbed by wind blowing in one direction, the sound will be carried off with it, and will be heard best in the direction of the current, weaker laterally, and weakest in the opposite direction. Thus, we arrive theoretically as well as experimentally and by daily experience at the desired explanation.

The inspiratory sound excited by the in-going current of air is kept * concentrated within such current, and so much of it

---

* Wintrich endeavors to explain the bronchial respiratory sound, as well as the bronchophonia by an increase of the concentrating power of the bronchial tubes in certain pathological states of the lungs. He sums up thus (p. 144): "One can see from all these experiments that at least the collection (the concentration of the waves of the vocal sounds and the regular reflection of these collected waves) is the main cause of the increased sound of the voice." Again (p. 156) he says: "If the vesicles do not contain air, and if the next branches, or even several of them, are surrounded up to the root of the lung by tissue which contains no air, and consequently are more capable of reflection, we hear the panting, so-called bronchial respiration." . . . .

"But if the vesicles contain no air from whatever cause, and if the bronchi to a greater extent become more capable of the reflection of the sound, then the expiratory sound also becomes panting, *i. e.*, *tube-breathing*."—(p. 159.)

There is a *quid pro quo* in all that. The concentrating and reflecting power of the walls of a cavity certainly must make the sound stronger, but this is only for the listening ear within such cavity; outside of it, on the contrary, the sound must be so much weaker as it increases within. Both facts stand to each other in relation of cause and effect. If a sound strikes a plane under an oblique angle, part of the sound is reflected in the opposite direction at the same angle, another part of the sound is absorbed by the material of the plane, and a third part passes through it outwards. It is, then, self-evident, that the more favorable such plane is to the reflection of the sound and to its concentration, the less of it will be absorbed and permitted to pass. How, then, can a sound circulating within a tube adapted for its better concentration by its very construction, be heard more distinctly outside? Skoda says (p. 46): "These experiments show that the sound passes but a little out of dense substances into the air, or from this into denser substances. And natural philosophy further teaches that the sound on its passage from one medium to another is always reflected, and that the new medium receives less of the sound than there would be in the same space if it contained the same medium through which the sound has been propagated so far. There will be so much more of the sound reflected, and consequently so much less of it received in the new medium, the greater the disparity of the two mediums in respect to coherence and consistence."

To make this still more evident, I quote the following experiment:—A person only is allowed to pass the tissue as will form the weak and soft vesicular respiration. During expiration the transmission of the sound is still more difficult. On its passage from the openings of the somewhat larger bronchial tubes backwards to the cells, it is met by the expiratory current.

Besides, I have demonstrated that the expiratory current is much stronger than the inspiratory current, and this circumstance, too, must tend to make the expiratory sound over the cells weaker compared with the inspiration.

Skoda thinks that the sounds produced in the different parts of the respiratory track lose their peculiar metal at a certain distance within the parenchyma of the lungs. He says (p. 95), under the head "*Changes of the respiratory sounds by propagation in the distance:* How the respiratory sound of the larynx is heard over the thorax, *i. e.*, through the healthy parenchyma of the lungs, we can ascertain by the following experiment: I make a healthy man stop breathing at the time we auscult the different parts of the thorax, while a third person produces a strong sound in the fauces of the man experimented upon, by blowing in a tube which has been introduced as far as possible through the mouth. The sound which the air passing the tube effects, resembles the respiratory sound of the larynx, and as it is very near the larynx, and strongly incited, it spreads through the substance of the lungs just like the laryngeal sound. In this experiment one hears, particularly in the interscapular space, a sound which has no resemblance with the laryngeal sound; it is deep, and difficult to be imitated with the mouth, as its consonant cannot be easily determined. In making an expiration with the consonant F we come nearest to this sound."

My experiment with the calf's lungs, as above detailed, goes far to prove that a sound made at any point of the air-passages is heard all over the lungs without any material change in its character. Skoda's experiment exhibits a want of accuracy. For how did Skoda know that the sound produced in the fauces

---

holds a watch, so as to touch one of the open ends of a tin tube, about eight feet long and flattened at certain places for the convenient application of the stethoscope. On the other open end I hear the ticking very loud because it is conducted there through the air in the hollow of the tube as well as through its walls. On application of the stethoscope to the flattened part, I hear the ticking again very loud, because the sound is conveyed there through the substance of the tube walls. But if the watch is not brought in contact with the tube, and is held near its opening, then I hear at the opposite open end the loud ticking, and on application of the stethoscope to the walls, even as near as one and a half feet from the watch, I hear nothing of it, although in the air I can hear it distinctly at a far greater distance. The sound also disappears at the other end, if closed with a tin lid. *Reflection and concentration*, therefore, do not explain the *bronchial* respiration, and as Wintrich on his part has demolished Skoda's *consonance* theory, the *bronchial* respiration must be considered as yet an open question.

through a tube introduced, was similar to the respiratory sound of the larynx? If the sound proceeding from the mouth of the third person through the tube in the fauces was made to resemble the laryngeal sound, that does not prove that the sound actually made in the fauces had the same character. Skoda says, "the sound was strongly incited;" that is, a strong draught of air was sent through the tube, and this very draught produces in itself a sound at the opening of the tube in the fauces, so that this sound, combined with the other one transferred there from the mouth of the third person, make up, together, the real sound transmitted to the parenchyma of the lungs. It is a mixed sound at its starting point, and its character is difficult to be defined at the outset.

Or, if Skoda meant, that by blowing in a tube the sound produced is always like the laryngeal sound, as he in fact says (p. 115), "One imitates the bronchial sound by blowing through a tube." Even with this construction, the foregoing objection is not invalidated. For, by blowing simply but strongly in a tube, a mixed sound issues from it; the sound of the mouth and the sound taking its origin at the tube end. Only when we blow so gently in the tube that we cannot by it create a sound at its distant end, can we hear the pure unmixed sound from the mouth coming out of it. Of all this every one can become fully convinced by trying this very plain and easy experiment. Moreover, the calibre of the tube, the shape and width of its opening, will prove of importance, as all these particulars contribute to make up the character of the *autochton* sound If Skoda had used my elastic stethoscope in his experiment, he would probably have heard a loud whistle in the interscapular space, because the sound which a strong draught of air produces at its end, when passing through, is a whistle. Finally, if Skoda's experiment is to prove that the vesicular respiration is not the laryngeal, tracheal or bronchial sound heard at a distance, Skoda certainly has missed his aim. He experimented on a man who did not breathe; consequently the sound of the fauces was conveyed to the parenchyma of the lungs through the medium of stagnant air, when the vesicular respiration might still be the laryngeal sound conveyed to the parenchyma of the lungs through the medium of the respiratory air current. Is it not remarkable that Skoda does not even hint at the reason of his not hearing, during the respiratory act of healthy lungs, the laryngeal sound over the parenchyma, as he did in his experiment, that is as the sound F? This leads to another question. Is not the vesicular respiration, instead of being produced at one bronchial opening, rather a result of a series of sounds? At the rima glottidis a sound is produced, another at the bifurcation, and so on at each bronchial branching off. Do not all these combine to the formation of what is dissimilar to any of them—the vesicular sound?

One point more remains to be settled. It is this. How are the different modifications in the auscultatory perception of the respiratory sounds to be accounted for? These modifications are, either what can still be called physiological ones, although they are sometimes the effect of some morbid change, or such as come exclusively within the pale of pathology. To the former belongs the so-called "rough vesicular respiration," or puerile respiration. The latter embraces what Skoda calls "the undefined respiration," (unbestimmtes Athmen), and bronchial respiration.

It is a fact that in children the vesicular respiration is louder and more distinct than in adults. Skoda and Wintrich explain this fact by the friction theory. Skoda (p. 92), "We know, for instance, that in children generally the respiratory sounds over the thorax is louder and more distinct than in adults, although the sound in the larynx does not exhibit such difference in strength." In the same individual the respiratory sound over the thorax may become stronger from different causes, and resemble the respiratory sound in children, although the sound of the larynx remains unchanged. We conclude, therefore, on good ground, that the respiratory sound over the thorax of children represents the character of the sound in the vesicles and minutest bronchi in the most distinct and most perfect manner. Again (p. 111), "The vesicular respiration is stronger in proportion to the resistance, the contractility of the air-cells, and the quicker and the deeper the inspiration. The different condition of the lining of the air-cells and of the minutest bronchi must also modify considerably the strength of the vesicular respiration. One notices that the vesicular respiration is louder whenever it is rougher. The rough vesicular respiration signifies the smallest degree of swelling in the lining of the minutest bronchi and air-cells."

Wintrich (p. 157), "The younger the individual the more elastic and resisting is the tissue of the lungs, and the more imperative the call for accelerated breathing, as with ladies, especially if they belong to the very nervous class. In advanced age the elasticity of the lungs diminishes, but the mucous membrane grows rougher, wherefore this circumstance compensates in intensity of the *sipping* sound (of the vesicular respiration), for the loss caused by the diminished elasticity. Nay, the roughness of the lining can increase to such a degree that one can hear also a rougher sipping sound, such as can be heard from the same cause in catarrh of the lungs, which is called the *rough vesicular respiration*."

The summing up of all this is, that in children the greater elasticity of the air-cells is the cause of a more accelerated breathing, and therefore the respiration, through increased friction, is so much louder and rougher, while the roughness of the lining produces sometimes the same auscultatory effect in adults. Though I have done full justice to the friction theory, I must be permitted to scrutinize that other dogma which declares that, *children breathe quicker than adults.* Children certainly breathe oftener in general than adults, within a given time, consequently with children each inspiration and each expiration is performed in a shorter time than with adults; but does that prove that they breathe quicker?" Children also eat oftener than adults, and perhaps they take shorter meals, but does that prove that they eat quicker?

Indeed, the very reverse is the case; children breathe oftener, but more slowly and gradually than adults.

Let us take for instance a strong, healthy boy, aged six years, height three feet, or in round numbers, 100 centimetres, weight 35 pounds, and a vital breathing capacity of 7 cubic centimetres to each centimetre of height, that is in all 700 centimetres of expiratory air, according to the tables prepared by Wintrich, after his most valuable and very extensive spirometrical experiments (p. 98.) Let us compare this child with a healthy, robust man of 30 years, 6 feet high, weighing 200 pounds, and with a vital breathing capacity of 24 cubic centimetres to each centimetre in height; that is in all 4,800 cubic centimetres of air expelled at each expiration.

As the man is of double the height of the child, it will not be far from reality if I presume, that in his dimensions from right to left, and from front to back, the man is also twice the measure of the child, so that on the whole the man is $2\times2\times2$, or eight times the full size or cubic measurement of the child. To be safer in this calculation, I will allow a deduction so as to suppose the man only six times the size of the child. In their comparative weight the man again is nearly six times the weight of the child, and at last, in regard to vital breathing capacity we find, with each expiration that the man expels more than six and a half times as much air as the boy. We can take it, then, for granted, that the lungs of the man are at their expansion, as well as their collapse, about six times the size of the child.

Now in looking at the number of respirations in a given time, we see that the man breathes sixteen times in a minute, and the child about twenty-four, or at the very best thirty-two times; that is, the child inspires at the most twice during one inspiration of the man. Or it takes the man, compared with the child, double the time to draw in six times as much air. But to do six times the work of another in only double the time, means to do the work rather three times quicker than the other, and so the respiration of the man must be three times quicker than the respiration of the child. The child breathes oftener, the adult breathes quicker. The respiratory muscles of the child act more gradually, and the air passes in and out of the lungs with less rapidity than with adults. Mathematics do not care for universal opinion, according to Galileo's dying declaration.

It is quite plain, therefore, that in children, the current of the in and out going air being weaker, and consequently the impediment to the conveyance of a sound from within the air-passages to and through the tissue of the lungs being lessened, the vesicular respiration is not only louder, but in the same degree rougher—that is, preserving more of its original character, when first produced at one of the bronchial embouchures. The less of a sound which reaches the ear the more unlike its original character will it appear.

What is the rule with children may occur exceptionally in adults, particularly in delicate and nervous ladies, who can still be considered healthy. The cause will be the same, a more tardy although short respiration, and not as Skoda has it "a more rapid and stronger inspiration." Whoever has devoted some time to auscultation must have met with the somewhat puzzling fact, that in the healthiest, most robust persons, with a broad, well developed thorax, the respiratory sounds are sometimes the softest and the least audible. The foregoing remarks explain this fact.

After this I feel warranted in saying, that whenever from a pathological state the vital breathing capacity of the lungs is diminished, and the number of inspirations is not increased in the same ratio, and whenever such disproportion attains a certain degree, then there is room for a louder inspiration, and sometimes also for a more distinct expiration, and such louder respiration will at the same time bear more of the original laryngeal, tracheal or bronchial character, while such respiration, if sufficiently retarded, may become perfectly bronchial, and all the intermediate varieties between the vesicular and the perfectly bronchial respiration are such, as Skoda has thought proper to class separately under the negative title of "undefined respiratory sounds" (unbestimmte Athmungsgeräusche). In this connection I cannot do better than to quote Skoda's own words. He says, (p. 111): "The vesicular respiration gradually changes to the undefined respiration;" and (p. 117), "The bronchial respiration gradually changes to the undefined respiratory sound."

It is also evident that the terms vesicular, bronchial and undefined respiratory sounds are ill chosen; that all these sounds are either bronchial alone, or at the same time tracheal and laryngeal; that they spring all from the same source and rest on the same principle, and that the difference is only in their auscultatory perception through the parenchyma of the lungs, according as they are conveyed there by or against a full and strong, or a more subdued air-current, or are propagated through a column of perfectly stagnant or comparatively quiet air.

To fix the character of these sounds, Skoda has compared them with the sounds entering in the formation of the different consonants. Thus he compares the vesicular respiration to a gentle sipping sound, somewhere between V and B; many of the undefined respiratory sounds he places somewhere near the consonant F, or between F and H, and the bronchial respiration is the imitation of a sound between the consonants H and Ch—the latter according to its German pronunciation—that is, a sound formed by raising the back of the tongue towards the palate during expiration. We would have then a sipping sound (vesicular resp.), a puffing sound (undefined resp.), and a panting sound (bronchial resp.) Such terminology I consider more appropriate.

Here I have to anticipate several questions. *First.*—Why could we not, at will, retard our breathing so that on auscultation we would exhibit bronchial respiration over the parenchyma of the lungs? *Second.*—If the bronchial respiration, perfect or imperfect (undefined resp.), is heard over one part of the lungs, why is it not heard at least over the whole of the same lung, as my experiments on the calf's lung, above quoted, have shown that the parenchyma of the lungs is an excellent conductor of the sound, and as the air-current can certainly not be in the way of the propagation of the sound from one part of the parenchyma to the other? *Third.*—When I said that a certain degree of retardation in the respiratory acts can produce the perfect bronchial respiration over the parenchyma of the lungs, did I judge so *a priori* or from certain positive facts?

First.—A repeated effort to retard the respiration has always proved a failure in regard to the production of anything like the bronchial sound, because the sound originating at the rima glottidis or at the bifurcation became so weak, through such effort, that it was scarcely perceptible even over the larynx and trachea. If I shorten my breathing, then the number of my respirations increased in proportion, or the whole amount of retardation was only the effect of prolonged intervals between the different respiratory acts. Experimenting on others gave the same result. Still, I believe that by training and practice one might succeed to a certain extent.

Second.—Experiments on calf's lungs have proven, that if one of the lungs made respiratory movements, sounds produced in the meantime in the other lung were propagated to the parenchyma of the moving lung very imperfectly, and that only at smaller distances. My belief is, that the cause of it is not that the tissue of moving lungs is less adapted for the reception of a sound from a part of tissue at rest, but that the moving lung exhibits sounds of its own, which silence the foreign sound to a certain degree.

Third.—The following experiment will speak for itself. I cut away the trachea of a calf's lungs to within about an inch from the bifurcation. In this I introduced the cylindrical end of a stethoscope after the removal of the ear plate. An assistant inflated the lungs through the tube, and at a certain degree of inflation he was directed to close the lips, and then to let the air escape through the full calibre of the tube. In the mean time I ausculted over the lungs, and could hear nothing of the sound produced by the escape of the air. But if I fixed the lower part of a straight catheter, air-tight, into the lower end of the stethoscopical tube, so that the air of the inflated lungs had to make its escape through the narrow side slits of the catheter, then the escape was slow and gradual, and exhibited on auscultation over the lungs, the most perfect bronchial respiratory sound, identical with the sound over hepatized or compressed lungs—Ch (German) with the vowel *ee.* If, instead of using the catheter, I compressed one of the bronchi during the escape of the air, the effect was the same. By this experiment I gained the further conviction that for the production of this most exquisite bronchial sound (Chee) it is indispensable that the bronchial embouchure, where it is formed, must be compressed to a longitudinal shape.

Why the bronchial respiratory sound is, as a general rule, heard more during expiration than inspiration, is readily explained by the circumstance that the expiratory sounds are more strongly incited than the inspiratory sounds, as I have demonstrated above, that the expiratory pressure, is *cœteris paribus*, greater than the inspiratory pressure. $P = xp$.

Diagnostic import of the bronchial respiratory sounds.—Although the bronchial respiratory sound is mostly met with over parts of the lung which do not contain air in the cells, either through infiltration or through compression, and through which part runs an air-carrying bronchial tube in open communication with the larger bronchi and trachea; still, the hitherto dominant opinion, that such condition of the parenchyma is the essential cause for the production of the bronchial sound, must be given up. My experiments have proven, beyond any doubt, that the condition of the parenchyma has nothing at all to do with the production of the bronchial sound.

It is well known that in dyspnœa the bronchial sound can be heard, sometimes, over the whole thorax. Skoda himself notices the fact. He says (p. 116): "And in great dyspnœa it (the bronchial respiration) can be heard between the shoulders, even over all the parts of the thorax, without any part of the lungs being without air." And how does Skoda explain that singular fact? He says: "This anomaly is explained thus, that the respiratory sound of the large bronchi, if sufficiently strong at its origin, does not require to be strengthened through consonance, to be heard over the thorax as bronchial respiration."

This assertion I am compelled to contradict most emphatically. In my experiments with the calf's lungs I found, invariably, that the stronger the assistant used his own lungs to set the calf's lungs in respiratory motion, the less I could hear of the sound transmitted in the latter. The real explanation is, that in dyspnœa the air-cells do very little towards expelling the air at expiration; the whole is more the work of the expiratory muscles compressing laboriously the thorax, and through it the lungs, which makes a very tardy and gradual expiration, and consequently gives rise to the bronchial sound.

The bronchial sound then signifies nothing else, but the absolute or only comparative stand still of the air immediately under or at some distance from that part of the thorax where it is heard. If a certain part of the lung does not partake at all of the respiratory movements, then the sound formed at the embouchure of the bronchial tube of the adjoining part of the lung, will be transmitted through the contiguous embouchure in the stagnant air-column of the bronchial tube, which runs through that part of the lung, whose air-cells do not participate in the respiratory task.

The diagnostic meaning of the so-called undefined respiratory sounds, is a similar one: a tardy and gradual ingress and egress of air in that part of the lungs where it is heard, or in a part not far from it. If we see a patient breathe short, and we hear at the same time the undefined respiratory sound, we may safely conclude that the number of his inspirations is far from being in such proportion as to make up for the shortness of breath, and that consequently there must be an actual insufficiency of breath.

It will not be considered a useless accumulation, if, in further corroboration of the foregoing remarks, I refer to a few more experiments of a different description.

Exp. 1. I blow the cheeks slightly up, so as to transform the space between them and the jaws, with the cavum oris proprium and the fauces in one cavity. Then I apply the funnel-shaped end of an elastic stethoscope to the cheek, close below the malar bone, and the other end introduce into the ear. In breathing quietly through the partly open mouth and the nostrils, I hear during both respiratory acts, a gentle aspiration, similar to the sound of *H* in the word house, but softer and less marked. The vowel of this auscultatory sound is, as near as comparison will permit, *ao*. During expiration, this sound of *Hao* is a little stronger marked.

Exp. 2. I bring the cheeks again in the same position, but close the lips, so that I breathe through the nostrils alone. On auscultation I hear the respiratory sound similar to the *German Ch*, with the same vowel as before, *ao*. This panting sound, *Chao*, is again stronger at expiration.

Exp. 3. I now apply the stethoscope to the declivity of the nose, in the region of the ala nasi. If I then breathe through the open mouth and nostrils, I hear the respiratory sounds as in Experiment I. (sound *Hao*).

Exp. 4. The former arrangement, but the nostrils are closed, and breathing is carried on through the mouth alone. The auscultatory result is the same as in experiment 2 (sound *Chao*).

These experiments prove, in the first place, that during quiet respiration through the open mouth and nostrils, no sound whatever is produced in these cavities, neither by friction nor otherwise. For how could it be that if one of these cavities is made impassable for the respiratory air, the sound in such cavity should be the stronger?

So much for "impressions" in matters of sound. But the reality is, that the respiratory sounds are transmitted from the larynx through the cavities of the mouth and the nose; that along with these sounds the respiratory air-current passes through the same cavities, which current, in concentrating the sound within the cavity, allows only a small fraction of it to pass through the walls of such cavity; and that when such current is checked by the cavity being closed, much more of the laryngeal sound is heard, the same as through a bronchial tube in which the air does not circulate.

The expiratory sounds in these experiments, are stronger than those of inspiration, because these sounds stand in the same relation of strength in the larynx where they originate. During forced respiration, or if we breathe through the comparatively narrow opening of the nostrils alone, then certainly a sound originates independently of the laryngeal sound at the nostrils, the lips, and probably also at the choanæ and the isthmus faucium, the same as at the rima glottidis, the bifurcation, and so on.

Synopsis.—1. The respiratory sounds are not the effect of friction, but of a shock at the point of meeting of two portions of air of different condensation.

2. The respiratory sounds are not produced all along through the whole of the air passages, but at certain limited points; at the rima glottidis, at the bifurcation and other bronchial embouchures.

3. The vesicular respiratory sound is not produced in the cells and the minutest bronchi, but at the embouchures of the somewhat larger bronchial tubes; or it is the effect of the whole series of sounds following each other, and combining, from these embouchures up to the rimi glottidis.

4. The expiratory sounds are all stronger, *cœteris paribus*, in their origin, than the inspiratory sound. Because the expiratory pressure is greater than the inspiratory pressure. P=xp.

5. The cause of that diminished sound, called vesicular respiration, is that the inspiratory current of air concentrates the sound within the bronchial tubes, and allows only a small portion of it to pass through the parenchyma.

6. The expiratory sound over the parenchyma is so much weaker than the inspiration, on account that the expiratory current carries the best part of it off in the opposite direction, towards the larynx.

7. Children breathe shorter than adults, but not quicker. On the contrary, they breathe more slowly, as the number of their inspirations is not increased in proportion to the shortness of their breath. The air-current is more gradual, and offers, therefore, less obstacles to the propagation of the sound to the parenchyma. This makes the vesicular sound in children stronger and better marked.

8. In adults, particularly in delicate and nervous ladies, similar circumstances may combine to produce a similar effect—the rough vesicular respiration, or as it is also called, the puerile respiration.

9. The retardation of the respiratory air-current may increase so as to produce the undefined and bronchial respiration, which differ only in quantity.

10. Bronchial respiration does not prove that the corresponding part of the parenchyma is airless from infiltration or compression; it only proves an absolute want or a deficiency of circulation of the air in that part of the parenchyma, or in the part not far from it.

11. In the cavity of the mouth and nose no sound is produced during placid respiration through both cavities.

12. During forced respiration, or during respiration through the nose alone, or only through a narrow opening of the mouth,

sounds are produced at the nostrils, at the lips and probably also at the choanæ and the isthmus faucium, the same as at the rima-glottidis, at the bifurcation, and so on.

Quarantine, Staten Island, January 10th, 1859.

Art. VI.—*Report of the Proceedings of the Medical Societies and of the Practice of the Hospitals in New York; prepared for the* New York Journal of Medicine, by George F. Shrady, M.D., Resident Surgeon to the New York Hospital.

NEW YORK HOSPITAL.

Fracture of thigh.—In noticing the peculiarities of the practice of the New York Hospital, I must not forget to refer to our method of treating fractures of the thigh. Though nothing original is claimed for the apparatus used, yet the experience of nearly twenty years has proved its practical value, and it is believed that its details have been so improved as to render the whole more convenient for application than any other with which we are acquainted. Believing that our mode of treatment is not so well known as it ought to be, I take this opportunity of referring to it somewhat in detail.

Before proceeding farther, I may be allowed to premise a little by saying, that it is the testimony of every one who knows anything definite in relation to the matter, that nowhere in the world are fractured thighs better treated than in the New York Hospital. This statement, I think, can be proved by a reference to statistics. Whether or not this is owing to the splint employed, I will leave those to determine who have used it.

Previous to 1837, fractures of the thigh in this institution were treated for the most part over the double inclined plane, and but very rarely Boyer's apparatus was employed. The results under this mode of treatment, as might be expected, were very unsatisfactory.

About the time I refer to, Dr. Gurdon Buck, who was on a visit to Philadelphia, saw Dr. Physick's apparatus, a modification of Desault's, for the treatment of these fractures, and was so well pleased with its general principle of application, that he determined to introduce it into this institution, as a decided improvement upon the old plan. This he did soon after his return to the city. He adopted Dr. Physick's apparatus in all its details, which consisted of a long outside splint, reaching from the axilla to eight or ten inches beyond the foot. It was perforated at its upper end with two half-inch holes for the purpose of securing the ends of the counter-extending perineal strap, and the extending band, formed of a silk handkerchief, was passed over a block that stood out from the splint below the foot, being secured finally in a hole further down at the lower end of the splint. There was also a short splint reaching from the perineum as far as the inner ankle, and a body-belt, passing around the thorax, tacked to the upper end of the long splint. In addition to all this, chaff pads were interposed between the splints and the limb. In applying the splints, they were first rolled up in a splint-cloth, and well secured in place by four separate bands passing around the whole apparatus.

After making use of the apparatus for some time, it was found to be defective in many particulars; for instance, the readjustment of the splint-cloth was found to be very troublesome, as it had to be repeated daily. The first improvement, then, of Dr. Buck was the substitution of these cloths for pads, which were fastened to the splint. The next improvement made by the doctor, was a pocket in the body-belt, and to the lower edge of this pocket were fastened buckles for the counter-extending strap. By this arrangement the splint could be removed for the purpose of readjustment without disturbing in any way either the belt or strap.

Notwithstanding the utmost care and pains bestowed on the adjustment of the extending band to the foot, it was found impossible to prevent sloughing and excoriation either above the heel, or over the instep. Owing to the evil consequences of such extension, it was finally supplied by well adapted lateral pressure, the limb having been previously extended. This being the case, it was necessary to reapply the pressure daily. This method was persevered in for some time, but was at length abandoned for the use of the adhesive plaster as a means of extension. It was first employed in 1850, during the residence of Dr. Frederick D. Lente, now of Cold Springs, Putnam county. This gentleman, by his zeal and intelligence in its application, successfully inaugurated its use in this institution as a valuable auxiliary in the treatment of this fracture. Buck's modification of Physick's Desault, is certainly a triumph in modern surgery, so far as it relates to shortening and deformity. I have now noticed the principal modifications of Physick's splint, there are, however, several minor ones, which will appear in the subjoined description of its mode of application.

When a patient is admitted with a fracture of the thigh, there being generally a good deal of swelling present, the limb is placed upon the double inclined plane until all the tumefaction has subsided. Then he is prepared for the application of the straight apparatus. The first step consists in the preparation of a double band of adhesive plaster about three inches in breadth, which is cut long enough to extend from below the point of fracture on either side of the limb, forming a loop underneath the foot, a sufficient distance from the sole to allow of the introduction of a square block. This block is a little broader than the foot, and serves to prevent the pressure of the adhesive bands over the ankles, and also affords a firm point to which is attached a short cord for extension. This adhesive strap is applied smoothly to the sides of the limb and a bandage applied over it, leaving the loop free, extension being kept up in the meantime by an assistant. The body belt and perineal strap are next adjusted, after which the coaptation splints are applied in the usual way around the seat of fracture. Then the upper end of the long splint is placed in the pocket of the body-belt, the limb drawn down as far as possible, and kept fully extended by means of a stout cord over the footpiece. This cord is attached to a ring in a large wooden screw which plays through the block standing out from the internal surface of the splint. Next, the inside splint, extending from the groin to the malleolus is applied, pads of blanket are then stuffed on either side to adapt the splints to the inequalities of the limb. All this having been done, the last step in the operation consists in binding the splints together, which is accomplished in the following manner. Three strips of bandage are passed at equal distances from each other behind the limb; one just below the trochanter, another just below the knee, and a third above the ankle.

The ends of these strips are then brought forward between the limb and the splints, carried over the anterior edges backward over the outside of the apparatus, crossed behind, and finally brought forward around the whole again and tied in front. By this arrangement a sling apparatus is made for the whole limb, at the same time the splints are nicely secured to each other. The extending force is regulated by means of the screw through the block. This block, I should say, slides in a fenestrum, being secured at any part by a screw arrangement, by which means the proper distance between it and the foot can be regulated in order to have the full advantage of extension.

This, then, constitutes Buck's modification, in other words, the New York Hospital splint, which since its first introduction into practice has never yet betrayed the confidence that has been placed in it. Perhaps the greatest addition towards perfection that it has had was the employment of the adhesive plaster; since that time, the results may be judged of from the following statement of 74 cases which involved the shaft of the femur exclusive of either extremity. These cases are taken in the order of their occurrence from the hospital records.

Seventy-four cases have been collected.

Of this number, 19 resulted without any shortening, the shortening in the remaining 55 averaging less than $\frac{3}{4}$ of an inch. The ages ranged from 3 to 64 years. 57 were over 12, and 17 under that age. Of the 57 there was no shortening in 13 cases, but in the remaining 44 the shortening was a fraction over $\frac{3}{4}$ of an inch. Of the 17 under 12 years, 6 resulted without shortening; the remaining 11 averaging less than $\frac{1}{2}$ of an inch shortening.

Leaving this subject, I will proceed to refer to a few cases of interest that have transpired since the last report was made. During the service of Dr. Van Buren, the following case occurred, which I think in its practical bearings is by no means devoid of interest.

Jacob F., aged 30, was admitted with retention of urine, 10 A.M., Dec. 25.—The stricture was the result of a gonorrhœa contracted five years previous, since which time he has been troubled more or less with a gleety discharge from the urethra. At the time of his admission he stated that he had not been able to pass water for 24 hours. After having given instruments a fair trial and without success an opium suppository (of 3 grains) was administered, together with a warm bath, after which a very small catheter was introduced and he was relieved of a quart of urine. He passed his water without much difficulty in a very small stream until the morning of the 28th, three days after admission, when retention again came on. Repeated attempts were made to relieve him, but without success, the instrument every time passing into what appeared to me to be a false passage. Dr. Van Buren at his public visit on the same day made a thorough examination of the urethra, while the patient was etherized and found the false passage to be situated a short distance from the stricture, extending several inches towards the prostatic portion.

The instrument, in consequence of this, was deflected from its course and could not be made to engage itself in the stricture, which was situated anterior to the membranous portion of the canal. It was not at that time deemed advisable to make any further attempts to pass an instrument, and the sole reliance was placed upon the tr. mur. ferri in xx. drop doses, every hour. The bladder was found to be much distended by examination per rectum. During the whole of the following night he suffered extremely, but about 7 A.M. the following day the tr. muriate came to his relief, the stricture relaxed its hold and a pint of urine escaped. I would state that the retention was supposed to be owing to inflammation occurring in and around the false passage—inasmuch as the stoppage of his water came on after he was in the hospital two or three days. Patient during the next 24 hours passed a quart of water. The tr. mur. ferri, in doses as above, was kept up with longer or shorter intervals for a day or two, when all danger of retention seemed to have passed, and he was put upon the use of the bi carb. of potass. in flaxseed tea, for the purpose of rendering the urine as unirritating as possible.

When the condition of the urethra was clearly made out, the patient was religiously let alone to allow of an opportunity for the healing of the false passage. That time having arrived in the course of two or three weeks a small flexible bougie was successfully introduced into the bladder. The patient soon after this, at his own request, was discharged without having been wholly relieved of the stricture.

I will next refer to an interesting case of strangulated hernia. The patient, a German, twenty-one years of age, about twenty-four hours previous to admission, in a violent fit of coughing, caused by the presence of a small bit of tobacco in his throat, felt something give way in the left inguinal region. This was soon followed by pain in the part, which gradually increased until admission, which was about 6½ P.M. On admission his surface was cold, pulse 62, respiration slow, and there was some hiccough present. I should have stated, that he had an attack of vomiting a short time previous. A tumor was found in the left inguinal region, about four inches in length, and two broad, oblique in its direction from above downwards, and firm to the feel. It seemed to be constricted at both the external and internal abdominal rings, while the intermediate portion was much distended. The general shape was pyriform, with the small end towards the internal ring. Every attempt was made to reduce it by taxis, with and without chloroform, when Dr. Van Buren was sent for, and an operation was resorted to by him two hours after admission. Previous to the operation, however, Dr. Van Buren expressed the opinion, that the hernia was a recent one, and was owing to a congenital deficiency of the septum between the peritoneum and tunica vaginalis ; he came to this conclusion from the general shape of the tumor. There was dullness, on percussion over the tumor, which showed that it contained omentum. An incision, five inches long, was made from the root of the penis upwards to about opposite the anterior superior spine of the ileum, through the long diameter of the tumor. The skin and superficial fascia being divided, the several layers of investing tissue were, in turn, carefully cut through. On coming down to the sac, it was found to be somewhat congested, and the intestine was found to be of a dark color. As was expected, a considerable amount of omentum was found in the sac, the tumor being mostly composed of it. The principal stricture was found high up, and was divided, and the hernia reduced, but whether this stricture really existed in the sac, or at the internal ring, could not be determined with any definiteness ; several constricting bands were also divided. The cavity of the peritoneum, as was predicted, was found to communicate with the tunica vaginalis by an opening, into which the end of the finger could be introduced. During the operation, the testicle made its appearance at the wound, but was soon replaced. The wound was brought together, the edges being nicely approximated ; a spica bandage was applied. The patient passed a pretty comfortable night, but the day after, symptoms of peritonitis, attended by excessive tympanites, manifested themselves, and on the second day after the operation he died. On the examination of the body on the next day, the intestines, both small and large, were found enormously distended with gas, with slight adhesions existing everywhere. The fatal issue in this case was attributed to the large amount of intestine (18 inches) strangulated, and the length of time which had elapsed before the patient sought assistance.

The next operation of any moment performed by Dr. Van Buren, was the removal of a large fatty tumor, weighing five pounds, from the back of the neck of a female aged nineteen years. The operation was interesting, not only on account of its extent, but also in connection with the character of the mass removed. Unlike ordinary tumors of this variety, it was possessed of no cyst, neither was it divided into distinct lobules. It was, in fact, nothing but a mere hypertrophy of the adipose cellular tissue in the neighborhood. She had other depositions of fat over her body ; a large lump was situated on each shoulder, a mass under her chin, with a general hypertrophy of the adipose tissue of the back. The operation, on account of the character of the tumor removed, was necessarily a very tedious one, the operator being compelled to dissect out carefully the whole mass, leaving two immense flaps. Notwithstanding every precaution was taken to secure union, by first intention, the whole of these flaps sloughed and separated, leaving a granulating surface equal in extent to the former site of the tumor. The granulating surface is now gradually closing over, and the patient is getting on very well. This case will be found more in detail, by a reference to the proceedings of the Pathological Society for January.

Dr. Van Buren also performed primary amputation of the arm for compound fracture, involving the elbow-joint. The patient, a short time before admission, fell with his left arm in a flexed position across a circular saw, which was revolving at a very rapid rate. The saw cut through the olecranon, shaved off a portion of the articulating surface of the os brachii, and also a portion of the radius, frightfully lacerating the muscles on the anterior aspect of the arm nearly as high as its middle. There was very little hemorrhage present. The radial artery was felt to beat at the wrist, but the injury was so extensive and severe that the operation, as aforesaid, was performed almost immediately after admission. Alanson's method was resorted to, and the stump left open. It is now two weeks since the operation, the surface of stump is gradually filling up, and the patient is improving fast.

Dr. Buck, during his term of service in the second division, trephined a patient for gunshot wound of the skull, which was received in a fracas. The wound was situated just above the mastoid process on the left side, about an inch behind and on a level with the top of that ear. Dr. Quinby, who saw him at the time he was brought in, on passing his finger into the wound found a depression in the skull, at the bottom of which was felt a flattened bullet. This piece of lead he removed by enlarging the external wound, and he then found that there was a circumscribed depression of a quarter of an inch. A consultation was held the following day upon the case, and it was determined best to trephine. The operation was accordingly performed by Dr. Buck. The margins of the bone around the depressed portion were gnawed off by the rongeur to a sufficient extent to allow the introduction of an elevator. Two small irregular pieces of bone were removed, the edges of which were bevelled off, at the expense of the external table, showing that the fracture of the vitreous portion of the skull was more extensive than the outer table. A very considerable quantity of blood followed the removal of these fragments, one of which had a groove on the internal surface of the lateral sinus, showing that that canal had been opened into. The hemorrhage was controlled, however, by a pledget of lint, the lips of the wound brought together, and a compress placed over the whole.

The patient went on very well for a couple of days, at the end of which time he was seized with a severe chill, which proved a precursor to phlebitis, from which he died at the end of ninth day after the operation.

Dr. Halsted, during his term of service last month, extirpated the eye for malignant disease of the orbit. The patient was a mulatto female, thirteen years of age, who was first seen by the doctor outside. The disease first began to make its appearance about three and a half years ago, when there was noticed an unnatural fullness of the outer canthus of left side. This fullness gradually increased, and filled up the cavity of the orbit to such an extent, that the eye-ball was pushed before it. The protrusion of the eye continuing, she was unable to close the lids perfectly. In the meantime, a well-marked aneurismal bruit developed itself. She never complained of any pain. In the middle of May last, Dr. Halsted tied the common carotid of that side, which operation was attended with a diminution in the amount of protrusion to that extent, that she could close her lids. From that time the bruit has entirely ceased. She progressed favorably for a couple of months, when the tumor began to grow rapidly, and continued to do so up to the time of her admission into the hospital. Supposing it to be malignant in its character, the operation of extirpation was determined upon, and accordingly performed by Dr. H. An incision was made through the outer canthus of the eye, and the cavity of the orbit emptied of its contents by means of the curved scissors, when a tumor was found of considerable size surrounding the optic nerve. This mass being examined by the microscope, was found to be cancerous. There was a good deal of hemorrhage present which was controlled by stuffing the cavity with sponges, and applying a compress and bandage over the whole. These sponges were removed in forty-eight hours, and the part dressed with picked lint. The wound is now granulating nicely, everything promises well, but it is feared, notwithstanding, that the disease will again make its appearance. Her eyesight was good up to two months ago.

BELLEVUE HOSPITAL.

Report of Five Cases of Fracture of the Vertebræ. By Charles Phelps, M.D., House Surgeon to Bellevue Hospital.

(Continued from p. 85.)

Case 3.—*Fracture and luxation of the first lumbar vertebra—Partial union of fractures—Death—Autopsy.* (Service of Dr. Stephen Smith.)—Ann Maddigan, domestic, born in Ireland, aged 30; moderately temperate, and of good constitution; admitted August 30, P.M.

History.—About 9 or 10 o'clock on the evening previous, while in a somnambulistic state, she had walked out of a third floor window, and falling two floors, struck upon the slated roof of a shed below. She was not rendered insensible, even for a moment, but could give no account of the direction in which the blow was received, except this, that she struck upon the left side. She had not, at the time, nor at any time previous to admission, either paralysis or anæsthesia, and no pain except upon motion. The left leg, however, had felt "numb" ever since. She had passed no urine or fæces since the accident.

Examination.—Upon examination, a slight deformity was detected in the region of the lower dorsal or upper lumbar vertebræ; an apparent displacement of a vertebra backward, and a very slight tenderness a trifle lower down, but no redness, ecchymosis, or other external mark of injury. The respiration was natural in character and frequency; the pulse rather frequent, but of moderate strength. The urine was drawn by catheter for a few days, and after that continued to pass involuntarily up to the time of her death. The bowels acted regularly. In the course of a week or ten days from admission, the vertebral prominence had increased to such an extent as to render easy diagnosis of luxation backward of the *first* lumbar vertebra. No paralysis or anæsthesia of any part of the body or limbs ever occurred. The very intense pain upon the slightest attempt at motion, which had originally characterized her condition, gradually diminished, and at length in considerable measure disappeared.

A bed-sore early formed over the sacrum, which slowly proceeded to exposure of the bone; diarrhœa supervened later in the progress of the case, and she finally sunk from exhaustion, and died Oct. 6th, 37 days from admission.

Autopsy.—Crushing of the body of the first lumbar vertebra, with displacement of the entire vertebra backward. Firm union in the fractured vertebra had taken place.

Case 4.—*Luxation and fracture of seventh cervical vertebra—Death —No autopsy.*—Thomas Reeny, carman, born in Ireland, aged 42; large, robust, intemperate, giving the rational history of phthisis; has passed renal calculi, but otherwise is apparently of strong constitution; was admitted to the hospital July 16th.

History.—On the preceding evening, when riding on his cart in a slightly intoxicated condition, he had been thrown off head first in consequence of a sudden jolt, striking first upon his head and then upon his back. He was not rendered insensible; noticed immediately that his limbs were all powerless. At the instant of the fall he felt intense pain "where the spine of the back is joined to the neck." Since then he had suffered it upon the slightest attempt at motion, but not at other times. The next day he had cramps in the left leg; the bowels were evacuated voluntarily in the morning, and the bladder in the afternoon. Seen during the day by Dr. James R. Wood.

Examination.—July 16, 11 A.M. Decubitus dorsal. Paralysis was complete below the clavicles. No anæsthesia except in either hand and forearm, as ascertained by a careful and entirely satisfactory examination. With the exception of some action of the scaleni, respiration was solely abdominal, but regular and easy. There was no priapism, though the penis was a little more excitable than usual. The temperature of the body was normal, or perhaps a trifle below the proper standard. There was no pain, except in the back of the neck, upon movement; but the feet and hands, and in a less degree the legs and arms, felt as if asleep. The neck felt easier when supported from behind, and pressed a little forward. He had complained of dyspnœa ever since the accident, but it was subjective entirely, and not at all objective. The bowels had been opened again by a cathartic this morning, but the urine had passed only upon the introduction of a catheter. This morning there had been some difficulty in deglutition, none previously, and the left side of the neck was somewhat swollen and tender. The intellectual faculties were as clear, probably, as they had been before the accident.

Ordered.—Beef tea and port wine in moderate amount.

Progress of case.—7 P.M.—Pulse full, slow, and hard, and 84 in the minute. Respiration 20, and as in the morning; catheter passed, but only ℥iij. of urine followed; ordered S. S. morph. and a mixture of carb. ammon. and spts. lavand co. in mucilage, to be given if indicated.

July 7, 10 A.M.—Patient comatose, and has been so through the night; pulse 88, hard, strong and moderately full ; respiration still abdominal, and 28 in the minute. Increased temperature of surface all over the body ; coarse, dry râles all over the chest ; no wet râles ; no pleuritic effusion ; no tympanites. Passed ℥xx. of urine through the catheter ; ordered enemata of beef-tea and brandy.

3 P.M.—Died. Just before death, the face became turgid, lips purple, and eyes protruding ; and three quarts (just measurement) of blood flowed from the mouth.

Autopsy refused by the coroner upon consideration of personal safety; exact diagnosis could only be conjectured.

Case 5.—Fracture and luxation of the fifth cervical vertebra.—Recovery. (Service of Dr. Stephen Smith.)—George Reid, tailor, born in Ireland, aged 29, short in stature, but well made and well nourished, of good constitution, and with no taints or tendencies ; admitted August 5th.

History.—In Sept., 1856, he fell backward down fifteen stairs, and struck upon the back of the head and neck. He was rendered insensible and remained so for three hours. With returning consciousness he had no recollection of what had happened, and became aware that an injury had been received only as he attempted to rise from the bed. He then felt an acute, spasmodic pain in the back of the neck, which subsided immediately as he fell back. This pain in the back of the neck, upon motion, continued three months. Three weeks subsequent to the injury, he began to have severe pain in the back of the head —usually nocturnal--and at that time was admitted to this hospital in the service of Dr. C. D. Smith. He was not intoxicated at the time of the fall, but has never since been able to recollect anything in regard to it, his memory not being otherwise impaired. There was no wound, contusion, or other external evidence of injury upon the neck. With the exception of the pain mentioned, he had no symptoms. Did not know that the head was carried at all out of its natural position. He had no paralysis, no anæsthesia, no difficulty in respiration, micturition, or defæcation, no increase of temperature.

At the present admission, he came in to be treated for the cephalalgia, which had still continued.

Examination.—Upon examination externally, the fifth cervical vertebra was found to be displaced forward ; and upon examination through the mouth, the same vertebra could be felt, forming a large prominence in the posterior fauces. He was unable to swallow solid food to any considerable extent ; this and the necessarily awkward position in which he was forced to carry the head, were the only present local difficulties resulting from the displacement. The neck was firm in its new position. His general health was good, and he was discharged as affording no particular indication for treatment.

NEW YORK PATHOLOGICAL SOCIETY.

REGULAR MEETING, NOV. 10, 1858. DR. E. HARRIS, *Vice President.*

(*Reported for the* NEW YORK JOURNAL OF MEDICINE, *by* G. F. SHRADY, M.D.)

Surface abscess of brain.—Dr. Krakowitzer presented an interesting specimen which occurred in a patient twenty-three years of age. His history presented the following points: When but a boy, he remembered having a discharge from the right ear, but was ignorant of the cause. As a consequence of this trouble, the hearing upon the affected side was less acute than the other. The discharge after a time subsided, and he continued in good health until about a year ago, when he received a stab behind the same ear, in a drunken broil. This wound healed up at the end of a week after it was inflicted. A short time after it had healed over, there was marked pain and swelling of the part. The wound was then laid open by a physician, and a free discharge of pus took place. He suffered a great deal, from time to time, which was caused by the closure of the wound. This, however, was relieved on allowing a free exit to the pus. Last July, when he married, the attacks became more frequent and severe. He was then obliged, when suffering from an attack, to hold his head stiff, and when he wished to rise, to hold it with his hands. On the 22d of last October the pain of an attack, which he had at that time, was so severe that he fainted away. On the 27th, Dr. Vos was called in. Soon after this, the patient was seen by Drs. Krakowitzer and Jacobi. They found an opening behind the ear about the size of a pea, into which a probe being introduced, dead bone could be felt. There was also found a hole in the mastoid process which connected with the cells about one inch and a half in length. The general symptoms, as have been stated, were those of intense suffering from pain. The skin was natural, pulse 84, head cool, pupils normal, answering readily to the stimulus of light. There was no distortion of the face, and the tongue protruded in a straight line. The symptoms in the course of the disease never changed. The patient never had a chill, nor was the appetite ever entirely destroyed. He improved somewhat from the enlargement of the wound, but considering this provision to be insufficient for the discharge of matter from the mastoid cells, an operation was performed on the 6th of the month, in order to give the discharge a freer exit. The external layer of the mastoid process was removed by a trephine, and a free oozing of matter followed the teeth of the saw. The cavity of the mastoid process was filled with thick purulent matter, which gave forth an abominably offensive odor. A large quantity of the dead bone was removed by Luer's forceps. The patient was not much relieved by the operation. The pain continued about the same, and he required opiates until yesterday morning, when he rather suddenly became comatose, and died.

Post-mortem examination—Dura mater and pia mater quite healthy.—On the anterior surface of the middle lobe there was a large abscess lined with a pyogenic membrane. On the anterior aspect of the petrous portion of the temporal bone, the dura mater was ulcerated to the size of a three-cent piece. At the bottom of this ulcer necrosed bone was exposed. No connection could be found between the cavity of the skull and these cells. The portio dura, it seems, was not in any way involved in the diseased action. There was found a communication between the cavity of these cells and tympanum. Pus was found in the cavity of the third ventricle.

Dr. James R. Wood remarked, that surface abscess, as the result of syphilis, was a very common affection; that it might exist for a long time without interfering with the functions of the brain. He had trephined several for this abscess with marked relief.

Dr. Krakowitzer stated, that his case was a syphilitic one, that a well developed chancre was about the only inheritance he left his wife.

Dr. Willard Parker presented a cancerous testis removed from a child ten months old. The exciting cause of the disease seems to have been a slight blow upon the testis about six or eight months ago. About six months after the accident, it was noticed that the testicle began to increase; this was particularly marked within the last week or two. During all this time, the little one complained of no very considerable amount of pain. The organ was removed by Dr. P., and was found to be encephaloid in its character. He stated that it was the youngest subject in which he had met with that disease.

Dr. Wood asked how long it was possible for a patient to survive after an operation was performed? According to his experience he had never seen one live over two years.

Dr. Parker never had a patient to live over a year. Dr. G. Buck could only state the sequel of one case, and that one terminated fatally within a year after the operation.

REGULAR MEETING, NOV. 24.—E. R. PEASLEE, M.D., *President.*

Wound of carotid artery.—Dr. W. Detmold, presented a specimen of wound of the carotid artery with the following history: He was called a fortnight before to see a child who had the day previous fallen down a flight of stairs upon an open scissors, causing an incised wound about half an inch in length, situated about half or three quarters of an inch above the clavicle in the course of the common carotid. It appears that the wound bled a good deal, but the physician who was called in at the time, succeeded in arresting it, and closing up the opening with sutures. When Dr. D. saw the child the morning after, it was in a comatose condition—around the wound referred to there was a diffuse false aneurism, which gave a distinct aneurismic thrill. He concluded from the facts of the case that the carotid had been wounded, but as there was no hemorrhage present at the time he did not deem it advisable to cut down and attempt to tie the vessel. He watched the child and did nothing; a day or two after, the child became hemiplegic on the left side, the wound being situated on the right. This paralysis disappeared in a day or two. He saw the child a second time, after which the wound was left open, but no hemorrhage followed; the child progressing very well, with a pulse never over 120, until the tenth day after the accident, when he died.

Autopsy the next day.—The injured vessel was exposed by a careful dissection, and there was found some blood in the sheath. The carotid was found to be severed entirely across with the exception of a small posterior band. The edges of the wound were found to be related to each other in such a way that the smallest amount of pressure was sufficient to cause coaptation of the parts. He supposed that the child died of phlebitis. The case was an interesting one, inasmuch as it proved that such an extensive wound of a large vessel could exist for ten days and be controlled by such a slight amount of pressure.

Dr. A. Clark asked if the paralysis was not due to a temporary interruption of the circulation through the part, and that when the force of the circulation was sufficiently restored to overcome the obstacle, the brain was again supplied with its normal amount of blood and the paralysis disappeared. He thought if the paralysis was due to the closure of a vessel by a clot, it would hardly disappear in two days.

Dr. Detmold believed that a small filament of coagulated blood was seporated from the main mass, carried into the brain until it came to an artery that was too small to let it pass, and in this way a small portion of the substance of the brain was deprived of its nourishment. The clot at the end of that time might have been absorbed and every thing go on as usual. In conclusion, he stated that he was not aware that paralysis was the result of ligature of the carotid in cutting off simply the supply of blood to the brain.

Dr. Clark stated that Dr. Jas. R. Wood related six instances where such a result followed the ligature of the carotid.

Dr. Van Buren stated that he had a distinct recollection of three cases that occurred under his observation, in which ligature of the carotid produced hemiplegia of the opposite side. In two of these the result was instantaneous. One case, he said, occurred under my care in Bellevue, which was performed for malignant disease of the nose in a man about the middle age. The case terminated fatally in 72 hours—nearly the whole of the side of the brain corresponding to the side of the ligature was found to be softened.

The second case also occurred in the same institution; the carotid was tied by Dr. Isaac Green—the patient was a middle aged man. This was also attended with paralysis, which he slowly recovered from, though I think, not entirely. The third case was one in which I assisted Dr. Valentine Mott to tie the carotid for malignant disease of the fauces. At the moment the ligature was applied there was hemiplegia of the opposite side. Patient after a while recovered from the paralysis, and the disease showing a disposition to return, the carotid of the other side was tied, paralysis also followed this operation. This second attack of hemiplegia was less severe than on the opposite side, and only lasted a day or two. The patient ultimately recovered for all I know to the contrary.

Dr. G. F. Shrady next presented a specimen of extensive abscess of the brain. It was removed from the body of one of the victims of the Thirtieth street tragedy, who died at the New York Hospital, on the 14th of November. The history of the case was as follows:

Elizabeth C——, aged 23, native of Ireland, was admitted to the

New York Hospital, Oct. 26th, during the attendance of Dr. Markoe, with scalp wounds, which were inflicted by a hatchet. Two of these wounds were situated just to the left of the median line, near the vertex, longitudinal in their direction, about half an inch from each other. The third was situated posteriorly on the right side, over the occipital bone, semicircular in form, and caused by a glancing blow of the weapon—they all extended to the bone. The skull itself did not seem to be injured materially. Several small pieces of the external table were chipped off in the posterior wound, and at the bottom of the wound nearest the vertex there was a small groove in the bone about an inch and a half in length, evidently caused by a direct blow upon the part. When first seen she was considerably prostrated both from the shock of the injuries received and the loss of a considerable amount of blood ; though there was no cerebral disturbance present. Reaction soon came on, and everything progressed favorably. She continued to do well, the wounds granulating nicely until the 3d of Nov., eight days after the injury, when she complained of severe pain in the side of the head in the region of the wound, attended with a great deal of febrile excitement, dilatation of the pupils, and the occurrence of hemiplegia of the right side. From that time she began to be stupid. Her bowels were freely opened, leeches were applied around the wound, a blister to the back of the neck, but without any good effect. Coma supervened on the third day after, when an operation was attempted for her relief by Dr. Parker, who was at that time attending-surgeon. During the night previous to the day of the operation the patient had four general convulsions, which were quite severe.

Taking these symptoms into consideration, it was thought possible that a portion of the internal table of the skull was depressed at the situation of the groove on the outside. Dr. Parker trephined over this spot, removed a button of bone, and found a small spicula of the vitreous table splintered off at a point corresponding with the external injury. The dura mater was diseased at that point, thickened, softened, and was unavoidably wounded by the trephine. A portion of this membrane, about as large as a two-shilling piece, was cut away. The brain substance immediately underneath did not seem to be injured, and presented no marks of any abnormal action, except a considerable discoloration of the part.

The wound was left open and dressed with cold water. The next day after the operation her mental functions were sufficiently restored to enable her to answer some questions intelligibly, but the appearance of her pupils were unaltered. On the 8th, three days after the operation, a small fungus, about the size of the end of the finger, made its appearance projecting from the centre of the wound ; still she kept on improving, complaining only of an occasional pain in the head, which was always alleviated by the application of leeches. The pupils still kept moderately dilated. Her pulse, during all this time ranged between 90 and 100, was moderately full but compressible.

On the morning of the 11th, six days after the operation, she was seized with another general convulsion, making the fifth. It was by no means as severe as the former ones, and lasted but five minutes. She continued in this state with a good deal of intelligence, able to answer questions promptly, pulse quiet and full until the night of the 12th, seven days after the operation, when rather suddenly coma again came on; her pupils became again widely dilated, pulse ninety-two, and thready. Leeches were again applied, and blisters placed on the back of the neck, but no abatement of the symptoms followed their use. During the day the fungus, which had increased none since its formation, was noticed to shrink away into the cavity of the skull, leaving nothing but the thickened scab which formerly covered it.

The coma grew gradually more profound during the following night, the pulse growing more and more feeble until eleven A. M. of the 14th, when she died. Early on the morning of her death, on removing the wet cloth from the wound, it was found to be smeared over with brain matter, this discharge continued until death took place, and amounted in all to a small teacupful.

The post-mortem examination was made four hours after death. The whole superior surface of the dura mater was thickened, and at the situation of the hole in the skull, there was an opening into it nearly as large as a half dollar, nearly circular in shape, with ragged edges. This opening discharged through it a considerable quantity of broken down brain substance mixed with pus, of a pinkish hue, which formed the contents of an immense abscess of the brain, occupying fully two-thirds of the whole substance of the left hemisphere. The cortical portion of the organ was destroyed for a considerable space around the wound in the dura-mater. The cavity of the left ventricle was found to be entirely obliterated, the *corpus striatum* and *optic thalamus* were almost entirely destroyed by the diseased action. The septum lucidum was partially destroyed. The corpus callosum was very much softened. The right hemisphere was very slightly affected, the softening being very superficial, and limited to the superior margin of the longitudinal fissure. The walls of the right ventricle were somewhat broken down, and the cavity was, to a certain extent, filled with the same material. Besides this, there was a small deposit of flaky pus around the optic chiasm and in the fold of the longitudinal fissure.

I omitted to state, that at the time of operation a very small quantity of pus was seen to flow from the wound in the skull.

Dr. Detmold in this connection referred to a similar case of abscess of brain, which was evacuated by a free incision. When he first saw the case, the patient was comatose, the pulse 40, and breathing stertorous. He removed a portion of bone, and found the dura mater perfectly healthy, but from the nature of the case, being under the firm conviction that an abscess did exist, boldly cut through, and evacuated it. While the pus was flowing, the patient recovered his consciousness. The quantity discharged amounted to five or six ounces. After that, the patient went about for a couple of months, and, with the exception of his memory, which however he entirely lost, he did very well. His reasoning powers seemed to be unchanged.

He lived sufficiently long to allow the wound to heal up, with the exception of a small opening through which a probe could be introduced for its whole length, into the lateral ventricle. At the end of a couple of months, trouble in the brain again came on, pus found in the ventricle, and was evacuated, but he died soon after. It was found that the *septum lucidum* had been ruptured, and discharged some of the contents of the diseased ventricle into the one upon the opposite side.

Dr. W. H. Van Buren next referred to an analogous case of another one of the victims of the tragedy. The wound was about one and a half inches to the left of the median line on the top of the head. It presented a solitary fissure which penetrated the skull, and resembled very much the appearance of a chop into a log by a broad axe. It was impossible to bring the edges into any correct apposition. A probe being introduced into the wound, went into the substance of the brain. He was satisfied that the dura mater was injured, and went no farther. There was neither concussion nor paralysis present. Under the circumstances, it was thought best to close up the wound, with the hope that the opening in the dura mater might close. Accordingly, sutures were applied.

The patient did well for thirteen days, when he was seized with convulsions, after which he was thoroughly paralyzed upon the opposite side. With a pair of cutting forceps, the cranial bones at the seat of the injury were carefully gnawed away. He then discovered that some of the fragments of the internal table were detached by the force of the blow. These spiculæ were found to be adherent to the dura mater, and when detached, pus was seen to flow. The child looked very much at that time, as if he was going to get well, it being fourteen days since the operation. After the operation everything went on very slowly, and in the meantime he began to be excessively pallid. This state of things has been noticed by Rokitansky, who supposes it to be owing to a lack of power in the nervous centre to elaborate the blood corpuscles.

He stated that four out of six of these victims were paralyzed on the opposite side of the injury. The other two were not hemiplegic. The eldest son was very severely injured—in fact, he had the most formidable wound of the six, yet not a bad symptom has showed itself since the injury, and he is now in a fair way to recover.

Dr. Krakowitzer stated that Dr. Isaacs of Brooklyn examined a case of fungus cerebri, where the matter protruded was essentially brain matter, as was proved by microscopical examination.

Dr. Parker referred to an interesting paper, by Dr. Gurdon Buck, published in the NEW YORK JOURNAL OF MEDICINE AND SURGERY, vol. ii. 1840. Thirty-three cases were collected ; in all these the fungus was found to be composed of brain-matter.

Dr. Krakowitzer thought that the fungus was a new growth, and that Isaac's case was a very rare exception.

Dr. A. Clark stated that he had examined portions of the fungus in two of Dr. Buck's cases, under the microscope, and was positive that there was not a particle of brain-matter in them.

PART SECOND.

CRITICAL ANALYSIS.

ART. VII.—*Statistical Report on the Sickness and Mortality in the Army of the United States.* Prepared under the direction of Brevet Brigadier-general THOMAS LAWSON, Surgeon General U. S. A., by RICHARD H. COOLIDGE, M.D., Assistant Surgeon U. S. Army. Washington, 1856.

THROUGH inadvertence, this volume has not hitherto received a notice in this Journal, although it has been issued nearly three years. We deem an apology for this apparent indifference due the distinguished officer under whose directions it appears, and the able editor, to whose indefatigable and intelligent labors, the character of the work must be chiefly ascribed. For that class of medical men, whose reports form the bulk of the work—men who volunteer to enter the army service, and spend their days in the inhospitable regions of our border—we have the strongest sympathy; nor would we in the smallest degree fail to show a proper appreciation of their contributions to medical science. The work presented under the above title is of such magnitude and peculiar—we may say original—character, that the few moments and brief space, usually devoted to the review of the ordinary new books of the day, are entirely inadequate.

Undertaken by Dr. Coolidge in obedience to instructions received from the Surgeon-general, the present work gives all the statistical information compiled from the records of the Department since the publication of the previous work, prepared by the late Dr. Samuel Forry, and printed in 1840, and embraces a period of time from January, 1839, to January, 1855. It contains the most complete account of the sanitary condition of our army, and the medical topography of the whole of our vast area extending from Maine to Mexico, and from ocean to ocean; and with the remarks on the topography and special diseases of particular districts—contained in the various sub-reports, as well as in the observations of the author—presents to the medical profession an array of important facts, such as could have been obtained in no other way. The organized whole is presented to us in a form which stands unrivalled in composition, arrangement, or topographical execution.

The volume is arranged in two parts, the first containing the statistical report of the sickness, etc., occurring in the army. These statistics are, for convenience, arranged under separate heads, corresponding with the great geographical divisions and their sub-regions. The second contains an account of the sickness and mortality of the troops during the Mexican war ; and to the whole an appendix is added, containing answers to the Surgeon-general's circular issued in 1843, requesting a report from the various medical officers, regarding the administration of quinine in *large doses.* Many of these are full of interesting statements and facts given by Surgeons Satterlee, Wood, Byrne, Harney, McCormick, and others.

The sub-reports contain information, interesting not only to medical men, but to others engaged in scientific pursuits. The botanist, geologist, zoölogist, meteorologist, and ethnologist, will find much that is valuable in their respective branches.

A complete analysis of the merits of every sub-report, and of the prominent features of each sub-region, would render the present review too lengthy, and our words superfluous, as the terse remarks made by the author at the close of the history of each region, are themselves so concise, that to do justice to the subject, we would simply be quoting Dr. Coolidge's own observations.

The sub-reports contain many valuable articles on the medical topography of particular districts and posts, written by medical officers there stationed. When all contain so much that is interesting, we are at a loss to select individual papers upon which to bestow particular commendation. Without disparagement to the others, however, we would fain attract attention to a few. In that portion of the work devoted to the northern division, we find an excellent article on the Medical Topography and Diseases of Fort Kent, by the late lamented Assistant Surgeon Wootherspoon, and in the *general remarks* on the diseases of the same region, attention is called to the rarity of malarious diseases in the sub-division comprising New England. These, when they occur, are usually in subjects lately arrived from more southern stations. Assistant Surgeon Sargent reports that in thirty-three years practice at Fort Constitution (Portsmouth harbor, N. H.), he had known of but one case of intermittent fever, not of foreign origin. Surgeon Moore gives some valuable practical remarks on scurvy. Another report relating to the diseases, etc., of Fort Fairfield, is from the able pen of Dr. Coolidge.

Dr. Isaacs (now of Brooklyn), in a report from Fort Wilkins, gives much useful information regarding the medical topography of the Lake Superior region, and also draws attention to the occurrence in 1844, of epidemic peritonitis among the soldiers at his station.

From the north interior region, west of the great lakes, we have an excellent report by Assistant Surgeon Charles C. Keeney. This, besides containing information interesting only to the medical man, gives many valuable facts regarding the geology of the country about Fort Dodge, Iowa, and the valley of the Des Moines River. The botany and zoölogy of the region are also touched upon, and add greatly to the interest of the paper.

Following this report, is one from Assistant Surgeon J. Frazier Head, giving an account of Fort Ripley, Minnesota, with its topography and diseases. As in the last mentioned article, Dr. Head gives much interesting information regarding the natural history and geology of the region, and in addition, furnishes to the ethnologist much that is useful concerning the native aborigines. Embodied in the report is a valuable letter from Dr. David Day, on the same subject. Dr. Head, in speaking of intermittent fever says: "no instance is known of the disorder having originated in the territory."

Assistant Surgeon Alex. B. Hasson, gives a thorough report on similar subjects from Fort Ridgely, Minnesota. The remarks, at the close of his report, concerning the cautions necessary to be observed in the examination of army medical tables of statistics are well worthy of attention.

Among the reports on the *middle division*, is one from Assistant Surgeon L. A. Edwards, on the diseases, etc., of Fort Washington, Md. In this there is a valuable table showing the relative frequency of intermittent and remittent fevers at that post, during periods of about twenty years' interval. Dr. Edwards remarks, that he believes "that intermittent fever is not only less frequent in that neighborhood than formerly, but that it bears a milder form."

In the pages devoted to the consideration of the *interior region east*, of the same division, are some interesting observations on cholera by Surgeons Finley and Byrne,* and in the reports on the *western* section of the division, are extended papers on different districts, by Assistant Surgeon Barnes, which will repay perusal, and cover much the same variety of subjects as those alluded to from Minnesota. Dr. Ridgely gives some interesting remarks concerning the limits of malarial districts, etc.

The *southern division* has furnished reports on the peculiarities of its class of disease, which should be read by every southern practitioner. The substance of Surgeon Porter's report on the diseases of Fort Moultrie, South Carolina, had already appeared in a leading medical Journal; nevertheless its present publication, as a *connected whole*, doubles its usefulness, although the deductions drawn will scarcely be indorsed by all.

Drs. McCormick and McParlin follow, with reports containing highly useful and practical remarks concerning yellow fever and cholera.

From the second section of the south interior region, we have a capital report on the diseases, etc., of Fort Gibson, in the Cherokee nation, written by Assistant Surgeon Coolidge.

Assistant Surgeon Rodney Glisan furnishes an excellent report from Fort Arbuckle, Arkansas.

A letter from Surgeon Charles S. Tripler, contains a very full special report on cholera Asiatica, as it attacked the 4th regiment of infantry while *en route* for California.

We must here stop the critical examination of the various sub-reports from the medical officers distributed over our great national area, with simple allusion to several which especially strike our fancy. From Fort Brown, Texas, Surgeon Moore; Ringgold barracks, Assistant

---

* Dr. Byrne is the author of a well-known treatise on the Contagion of Cholera.

Surgeon Moses; Camp J. E. Johnston, Assistant Surgeon Swift ; Fort McKavett, Texas, Assistant Surgeon Crawford (this report contains much useful botanical information) ; Socorro, New Mexico, Assistant Surgeon J. F. Hammond ; Monterey, California, Assistant Surgeon King.

Art. VIII.—*Review of the 22d Volume of the Memoirs of the Imperial Academy of Medicine of Paris.* By J. W. Greene, M.D.

Upon examining the recent volume of the Transactions of the French Imperial Academy of Medicine, we find that its members have recently remodelled and revised the by-laws governing their Association. As these changes are material, we have concluded in the present review to give an abstract of them for the benefit of the readers of this Journal.

The first article proclaims that the titulary members shall be limited to one hundred, and that they shall be divided into eleven sections, as follows :

Sec. 1st. Anatomy and Physiology,	10	Sec. 7th. Obstetrics,	7
" 2d. Medical Pathology,	13	" 8th. Public Hygiene and Legal Medicine and Medical Police,	10
" 3d. Surgical Pathology,	10		
" 4th. Therapeutics and Natural History of Medicine,	10	" 9th. Veterinary Medicine,	6
" 5th. Operative Medicine,	7	" 10th. Medical Chemistry & Physic,	10
" 6th. Pathological Anatomy,	7	" 11th. Pharmacy,	10
	57	+ 43 = 100.	43

The second article states, that the Free Associates are limited to the number of ten. The National Associates can be as many as twenty. The Foreign Associates are limited to the number of twenty. The number of National Correspondents is fixed at one hundred, the Foreign Correspondents to the number of fifty. The National and Foreign Correspondents are next divided into four divisions, as follows :

1st div.—Anatomy and Physiology, Medical Pathology, Therapeutics and Medical Natural History, Pathological Anatomy, Public Hygiene and Legal Medicine. The number of national correspondents 50 ; Foreign at 25.

The 2d division consists of Surgical Pathology, Operative Medicine and Obstetrics. The national correspondents are 24, the foreign at 12.

The 3d division is that of Veterinary Medicine. The national correspondents number six, the foreign three.

The 4th division is comprised of Physics, Medical Chemistry, and Pharmacy. There are 20 national correspondents and 10 foreign. The meetings are held every Tuesday at 3 o'clock P.M.; only members can assist at these reunions. There are two secretaries, one perpetual, the other annual ; the latter supplying the place of the former when absent, and forming one of the four who constitute the administrative council. All papers presented to the Academy are dated by the perpetual secretary in the order in which they arrive, and they are read in the same order, except by vote of the Academy. If any paper is thought worthy of a particular report it is handed to a committee. This commission may number three, five, seven, nine or eleven members, according to the importance of the object. Besides these there are permanent committees, which are composed of six or nine members. These are elected each year, in December. Printed works are not subject to a report unless they are foreign. These reports can be discussed at a regular or special sitting. On the first Tuesday in May in each year there is a public meeting, at which the labors of the past year are shown; eulogies are read on members dead during the year; the names of authors who have merited prizes; the announcement of new subjects for prizes for the ensuing year, and the reading of designated papers. No discussion can take place at this meeting. No one can become a resident member, unless a regular graduate either in medicine, surgery, or received by a special school of pharmacy or veterinary medicine; and he must also make the express demand to be received. There must always be three months vacancy before a place can be filled. All demands for membership addressed to the Academy are returned by them: 1st, To the section where the vacancy exists, if of a resident member; 2d, For all the other nominations, to a special commission, composed of at least five members, elected by ballot.

The Academy shall propose, at least once a year, a subject for a prize; the paper to consist of experiments, of observations, or of positive researches. The resident members alone are excluded from this "concours."

The Academy upon the demand of government, shall choose from among its members, a committee, to be sent to any place where an epidemic is raging; to make observations upon new mineral springs; or, where public utility shall render their presence necessary.

The Academy can, at its own expense, send a deputation to attend the obsequies of any of its members.

No bust or painting of any deceased member can be placed inside the walls of the Academy, until five years after his decease.

The officers for the year 1858 are: President, Laugier; Vice President, Cruveilhier; Perpetual Secretary, Dubois (Fred.); Annual Secretary, Devergie; Treasurer, Gimelle.

By the list there are one hundred and four resident members, so there can be no election until there have been five deaths.

There are ten national associates; there should be twenty; seventeen foreign associates; full number twenty. Eighty-five national correspondents of the 1st division, these are to be reduced to fifty. Forty-five national correspondents of the 2d division, should be reduced to twenty-four. In the 3d division there is but one where there should be six. The 4th division has the right number, viz. twenty. There are fifty foreign correspondents in the 1st division, there should be but twenty-five. In the 2d division there are twenty-four, there should be but twelve. In the 3d division there are four members, should be but three; twelve members are in the 4th division, there should be but ten.

The next article in order is *The Eulogy upon Magendie,* given by the perpetual Secretary, Dubois, at the annual public meeting held in May. He commences his oration in the words of Guizot. "Science has its sublime speculators, and its prophets, who unravel by a coup d'œil the great laws of the universe and seize them; as Columbus discovered the New World, in starting out to search for it upon the faith of an idea. Around these range themselves sagacious observers, who excel in the research of particular phenomena, prove them, describe and attach them successively to the domain of science; and in this domain so enriched enter the legislative spirits, who class the facts gathered, assign the reports, determine the laws, resolve them into general formulas, define the present state of sciences, and these then become the point of departure and the instruments of new conquests." Of these three methods of serving and enlarging science, there was one which was exclusively adopted and which this eminent physiologist extolled during the whole of his life. Magendie had nothing in common with those elevated spirits or enthusiasts, who inspired by an hypothesis, throw themselves at hazard into the field of science. Neither did he belong to those penetrating and ingenious men who hasten to coördinate and bring together general laws from facts which others have gathered. I will say more, he was rather disgusted with those wise men who performed this mission. His own, was not more humble, but more simple, and more accessible. A sagacious observer—a merciless and able experimenter, Magendie endeavored exclusively to verify and prove particular facts already announced in science. It is true that in this work of verification and demonstration Magendie did not make any important discovery in physiology, he made no new laws, but he did place in strong lights facts, that up to his time, were in obscurity; he gave certitude to facts that were till then uncertain; so that we may claim the right to place his name beside those of inventors; and in this view we can pardon his having, at times, endeavored to dispute with them the glory. The torch, almost extinguished, he relit, and with it threw light upon those parts of science then in the shade, adding the brilliancy of his own proper wisdom.

Francis Magendie was born at Bordeaux on the 6th of October, 1783. He was the son of Anthony Magendie, a surgeon. Coming to Paris, he commenced his medical studies, contended for and received the place of Interne of Hospitals; from interne he became aid in anatomy, then prosector. Many of his first papers were read before the Academy of Sciences, and were much talked of. In 1814, when the whole nation were arming for war, Magendie received an imperial decree relieving him from joining the army, which at the same time told him that he owed the favor to the success he had already met with in science. He published in 1817 an article upon the circulation. He restored to science the cephalo-rachidian liquid till that time forgotten, although before discovered by Cotugno. In 1821 he took up Charles Bell's experiments upon the nerves of motion and sensation. Bell cut the trigeminii at the point of emergence, Magendie went further and made the section inter-cranial; the integuments of the face, the surface of the palate, tongue and the interior of the nose, became insensible. In 1830 he was made Professor at the College of France, taking the chair of Laennec. From this time it became the chair of experimental physiology. He visited Great Britain; at London he exhibited some of his experiments, but the Society for Prevention of Cruelty to Animals raised such a clamor that he came near being expelled the country. An old Quaker came to Paris from America, called at the college and demanded to see Magendie; being presented, he addressed him thus: "I came to speak to thee, and I see that I have not been misinformed. They tell me that thou makest thy experiments upon living animals; I came to ask by what right thou doest so, and to tell thee that thou must cease the practice, because thou hast not the right to kill or to make the animals suffer—and also, thou settest a bad example and dost habituate others to cruelty." He rid himself of the Quaker and went on.

In 1818, he was chosen to the hospital. In 1826, he was proposed as suppléant to Salpêtrière. In 1830, he was named physician to Hôtel Dieu, to which he remained attached until 1845, when he retired with the title of Honorary Physician to the Hospitals of Paris. He was chairman of the Committee of Public Hygiene; a member of the Academy of Sciences and of the Academy of Medicine, commander of the Legion of Honor, and his place in the College of France filled by an aid. He was the author of seventy-eight papers, many of them being enlarged to book form. He died on the 8th of October, 1855.

The next article in order is a *General Report upon the Prizes* given during the year 1857, by M. Depaul, Annual Secretary. The first was the prize of the Academy of the value of 1,000 francs. The question was, "To determine by clinical facts the degree of usefulness of permanent counter-irritation in the treatment of chronic diseases." The question was not answered satisfactorily; the prize was withheld, but 600 francs were given as a recompense to Dr. Zurkowski, the author of the best monograph.

The second best paper was by Dr. Tertre Vallier. He received 400 francs as an encouragement.

The third paper, by Dr. de la Garauderie, received the first honorable mention. Dr. Revillout received the second honorable mention.

The prize founded by Capuron for Accouchments, was contended for by four competitors; none however received it. The question was, "*Sudden death in the Puerperal State.*"

The next reports, upon *Nervous Vertigo,* traces with care the differential diagnosis, to signalize the characters which distinguish it from vertigo produced by plethora, by anemia or by an organic cerebral lesion, and indicate the particular treatment. The prize was given to Dr. Max Simon. Drs. Trastour and Newcourt received the first and second honorable mention.

Lefever's Prize, value 1,800 francs, *on Melancholy,* was concoured for, but no prize was given. 800 francs were given to Dr. Charrier as an encouragement, and 400 francs for the same purpose to Dr. la Tertre Vallier, and also 400 francs to Dr. Joseph Rotta.

Baron Barbier's Prize of 3,000 francs, to be given to any one who should discover a complete means of cure for any of the diseases generally considered incurable. Dr. Bourgoyne finds a complete identity between the producing causes of cholera and pernicious paludean fevers; conducted by this luminous idea, he gives pills of tannate of quinine, camphor and opium. These are so efficacious, that whenever he is called early the patient always recovers.

Dr. Vrancken has also discovered what he considers an infallible cure. Eight grammes of chlorohydric acid are mixed with a quart of water. To quote him, this is given "en quantité modique, mais souvent répétée." Of this, about three quarts are considered sufficient in twenty-four hours to cure anything. Women, old men, children, are cured rapidly.

Dr. Garnaut prefers acetic acid. This discovery was made by accident. A patient, by an error, swallowed a glass of vinegar that had been used for the purpose of rubbing him. He was cured. This was a ray of light for our confrere. The antidote to the choleraic poison was found !

There are many other modes of treatment quite as ludicrous.

Messrs. Bachelet and Froussard attempt to cure hydrophobia. They think it proceeds in the dog from excess of continence, so they recommend castration.

The d'Argenteuil Prize was not given this year in consequence of the number of monographs, the committee not having had the time to come to a decision. Its value is 12,000 francs.

Silver medals were given to Drs. Gestin, Brouillet, Perrochaud, Raimbert, Ragaine. Bronze medals to Drs. Duclaux, Jobert, Lemoine, and Gauné.

The next article is a discourse pronounced by Michel Levy at the inauguration of the statue of Geoffroy St. Hilaire, at Etampes, in October, 1857. There is also a report upon the epidemics in France during the year 1856, made in the name of the Commission of Epidemics, and read to the Academy in October, 1857, by M. A. Trousseau.

Next comes a general report upon the mineral waters of France, made by Dr. Guerard, read before the Academy, November, 1857.

Of Nervous Vertigo and its Treatment. By DR. MAX SIMON. Paper "Couronné," by the Academy of Medicine of Paris.

The author devotes the first chapter entirely to general considerations; the second to the history of the disease. Commencing with Hippocrates, he mentions Galen, Areteus, whom he places next to Galen as emitting the most valuable ideas on the subject, Actius, Avicenna, Oribasius, Fernel, Baillou, Sydenham, Baglivi. Up to this time, although the disease was known, it had been confounded with others. But Sydenham seized it; Boerhaave equally well observed it; Van Swieten, Sauvages, Gorter, Clouquet, Krauss, Herz, Tissot, C. Franck, Hufeland, J. Franck, also happily recognized it.

The third chapter is occupied in proving the reality of nervous vertigo. All the authors from Galen to Sauvages, and from Sauvages to Sandras and Troussean, who have occupied themselves with vertigo, have studied it as a simple sympathetic neurosis, or an essential neurosis. Most persons are subject to vertigo from slight causes, as waltzing, riding rapidly, being at great heights, etc.

In the *fourth chapter*, he treats of the definition and nature of nervous vertigo. He defines it to be a painful illusory turning, which seems to carry with it the person and external objects, whether they are in repose or in movement, and where the body totters and is ready to fall. This definition, which he borrows from P. Franck, he accepts so far as it relates to exactly the vertiginous sensation conceived in an abstract manner, but he does not give it the extended signification of Franck. All modern physicians have studied this disease as a symptom and as an essential disease. Authors who have written on this subject have studied it and treated it as a particular perturbation of nervous function, and these have embroiled the whole question by their tendency to see the affection as an essential instead of an accident in many cases.

He finds it impossible to localize the trouble to a limited extent. It is never dangerous—never produces death. Is the point of departure to be placed in the peripheric nerves, in the organ of vision, in the nervous cords, or in the centre of perception itself? Piorry establishes the fact, that in a certain number of cases the "migraine" is a neurosis of the iris with an ambient iridiation more or less extended.

The *fifth chapter* divides the subject. In the first group he places those who, attacked by vertigo, do not offer to the observation, either from the nervous system or from any of the other systems, any trouble, either static or dynamic, which can hold this accident in dependence. This is idiopathic vertigo, properly so called. In the second group are placed those in whom the vertigo starts from a purely functional derangement of an organ other than the brain, mingles itself with various accidents, but is detached, nevertheless, by the clearness of its manifestations, its intensity, the frequency of its reappearance, and its duration. This is sympathetic vertigo. There is one function in the economy whose perturbations frequently give rise to vertigo. This is the genital, when disturbed by masturbation, excess of coitus, spermatorrhœa, and in rare cases continence. He calls attention to the fact, that many patients are bled, blistered, and starved, because the physician does not understand the disease.

Chapter sixth treats of the symptomatology and preliminary considerations. The vertiginous sensation, when we see it clear and distinct, cannot declare to us the dynamic or static condition of the phenomenon. It is useful for symptomatologists to study this sensation in some of the circumstances where it is produced without being a disease, properly so called. The study of this subjective side of the phenomenon is here more necessary, for, to tell the truth, in the primitive nervous vertigo frequently the vertiginous sensation constitutes all the disease, in so much, at least, as an intermittent manifestation, producing itself at intervals more or less long. A common cause of vertigo is mounting to an elevation and looking freely down and around. In this case the vertigo consists, ordinarily, in a sentiment of instability, provided there are safeguards to prevent the persons falling; but should these be absent, the illusion is carried past this, to the annihilation of view, to scotodinia, and his fall will be inevitable. In such a case, it is evident that the vertigo, in the first phase of its development, is a physical phenomenon unknown in its nature, but which, one degree more advanced in its manifestation, a physical influence, fear, comes to mingle itself with this first impression to give it a more decided character.

The result is not the same when the vertigo results from the action of turning rapidly as in the waltz, or by looking at anything that is whirling rapidly itself, or by the uniform and continued movement of a large body of water. Here it is not the sentiment of instability, but the primitive character of vertigo, the visual illusion. Primitive or idiopathic nervous vertigo, like all neurotic vertigo, is submissive to the law of periodicity; but while in many other diseases the organism attentively interrogated presents frequently some phenomena which reveal more or less surely the morbid servitude which weighs upon the nervous system, nothing in pure vertigo betrays it outside of its access. Most of the neurotic troubles are produced again and again by the same exciting causes, nothing of this kind takes place in nervous vertigo, once the access terminated, the impression is completely effaced; when the vertigo is simple, it is only a passing accident of the nervous system, which receives no durable attack or none capable of reproducing itself in the intervals of access of the disease, by any symptom which would betray it before the development of the disease itself. These irregular periodical accesses by which nervous vertigo manifests itself, and which in the state of science are the sole means given to our observation, are the ones by which we intend studying the disease. The phenomena present themselves under various forms and in different degrees of intensity. These varieties of form and of intensity constitute all the symptomatology. Some persons are troubled with vertigo even when in the horizontal position and with the eyes shut, others when rising suddenly from a recumbent position; this latter can be avoided generally by rising carefully. When the vertigo is more intense, the patient becomes fearful, sees objects as through a veil or has illusory visions, luminous sparks are seen, sometimes he falls, but falls voluntarily, so to speak, not as in an epileptic or apoplectic fit; he does not lose his senses. If by chance he does, it appears to be from the fear, not from the functional cerebral trouble. When the disease arrives at this point, the general circulation, which is calm in simple vertigo, is more moved, the pulse is accelerated, but the skin does not appear to increase in heat proportionately; sometimes there is nausea, followed by vomiting, which generally puts an end to the trouble; but these latter difficulties are rare in simple vertigo, they are generally found in complex cases. The second article takes up the consideration of this subject of sympathetic vertigo caused by dyspepsia. He speaks of the great sympathy existing between the stomach and other organs, and states cases where this vertigo has been produced by a few glasses of soda water, wine, or by articles of food. Article third treats of vertigo produced by hypochondria, venereal excesses and spermatorrhœa. He states that these cases are not rare. In speaking of that caused by seminal losses, he says, before the excessive losses have thrown the organism into that grave state called tabescence, and have extinguished in the genital apparatus all force of reaction, each venereal excess, either by coitus, or by masturbation has a direct reaction upon the nervous system, which receives a more or less profound blow, and the nervous vertigo results from this perturbation. He also cites cases produced by excessive contineuce. Article fourth is devoted to vertigo during the convalescence from other diseases. Article fifth treats of sea-sickness or marine vertigo.

Chapter seventh is occupied by the progress, termination and prognostic. Nothing is more irregular in its progress. It has continued with variable intermittences nearly the whole life, or it may be of very short duration. The access is also very irregular and comes on from the most varied causes. Vertigo, considered as a pure neurosis, is very generally of little account so far as life is concerned.

Chapter eighth is upon the differential diagnosis and is divided into paragraphs, the first of which treats of vertigo produced by anemia; the second of vertigo in a plethoric condition; the third, vertigos caused by organic diseases of the brain.

Chapter ninth is devoted to the etiology of the disease, which is classified under two heads. Causes of idiopathic vertigo and the causes of sympathetic vertigo.

Chapter tenth, the concluding chapter, applies itself entirely to the treatment. He first speaks of the momentary vertigo which he calls physiological vertigo. For this kind he recommends the patient to accustom himself to the things that produce the trouble, perseverance in this will cure the disease, he thinks. The next in order is idiopathic vertigo. In this disease the patient is to be placed horizontally, unless he is easier in some other position, as sometimes happens. The clothing should be loosened, he must be perfectly quiet, the room must be quite dark; when the patient loses his senses, the same means are recommended, with the addition of dry frictions—alcoholics, aromatics, coffee, or the inspiration of ammonia; during the intermissions, castoreum, camphor, or the tempering powder of Stähl; Pitcairn speaks well of opium. The vertiginous habit should be combated; this depends upon the morbid activity of the encephalon; regulate the life of the patient; let them follow hygienic laws. The intervals between the repasts must not be too long; the patients must avoid as much as possible all saddening emotions, and everything that will weigh upon the mind. They must avoid all drinks or food that generally disagree with them. Most usually decoctions of sage and mint, etc., are found to be very useful. Valerian and assafœtida were much used by Herz. Attention must be paid to the bowels as there is generally constipation. The datura stramonium was used by Abercrombie with success. In many cases moral force is necessary. It is necessary that the practitioner should be careful not to confound the idiopathic form with the plethoric.

Vertigo depending upon dyspepsia is a variety more amenable to treatment than any of the other forms. This form generally depends upon a hypersecretion of acid in the stomach. Magnesia, lime water, pastilles, Vichy water, etc., are the best means of satisfying the first indication. Sometimes the intestines are so irritable that the slightest causes may produce diarrhœa. In these cases the alkaline waters are very beneficial; but this medication only removes the trouble temporarily. Trousseau recommends this to be prolonged after the patient feels well. When the patient can do it, travel, combined with the use of mineral waters, is good. This treatment is only to be used when the disease is light. When the stomach has undergone profound alteration, or a saburral state has taken place, an emetic or purgative may be given; this done, we may then return to the alkaline treatment. The diet must be strictly attended to. Bitters, the excitant tonics, etc., may be given with success. Attend to the bowels; if they are not relieved by the common methods, 10 or 15 grammes of senna, with 10 or 15 drops of cherry laurel water, may be given.

Nervous vertigo from hypochondria, spermatorrhœa, and venereal excess.—It is not necessary to go at length into this treatment, as it is only that of the diseases mentioned. In regard to spermatorrhœa, he recommends lupulin, which he considers the opium of the generative apparatus.

The vertigo during the convalescence from diseases, as fevers.—Ducher and Widel used cinnabar in these cases, and report four cures. He does not think that quinine is of benefit in this kind of vertigo following intermittents, but prefers the general tonics.

Nautical vertigo.—He recapitulates many popular remedies that have been tried, but thinks that keeping in the open air, smelling salts to combat the syncopal tendency, not to look at anything movable, not to take part in arguments, eating the meals on deck, mint water, aromatized pastilles, a belt around the stomach moderately tight, which must not press on the chest. If the vomiting comes on with all these precautions, then the patient must take the horizontal position; he may then have tea, infusion aromatic, grog, etc.

Arthritic or gouty vertigo.—He states that it is with extreme circumspection that he expresses himself upon the reality of this variety of nervous vertigo. He cannot deny in an absolute manner the reality of connection in certain cases between the arthritic diathesis and the vertiginous habit. The authorities who have written on the subject suffice to place it on the nosological catalogue. He does not pretend to do it, but only to call the attention of practitioners to the facts.

The Academy offered a prize of 1,000 francs for the best paper upon the question, "*To determine by clinical facts the degree of usefulness of permanent counter-irritation in the treatment of chronic diseases.*" The question not being answered satisfactorily, the Academy withheld the prize, but gave 600 francs as a recompense to Dr. Zurkowski, the author of the best monograph. He restrains the list in which counter-irritants may be used, and does not occupy himself with a great number of constitutional affections, for the cure of which practitioners have recommended this means of cure. He does not attach any importance to the form of the counter-irritant. The suppuration is the valuable part of the process. In Potts' disease he reports twenty cases of cure in thirty-eight cases. In twenty-two only of these cases were the exutorics applied through the course of the disease, while in the others they were applied intermittently. The results were almost the same in general paralysis, amaurosis, different forms of ophthalmia, deafness, chronic diseases of the respiratory, abdominal, and genito-urinary organs. A long chapter is devoted to phthisis pulmonalis, and he relates twenty-five cases of cure by this means. In chronic rheumatism, neuralgia, and divers forms of mental alienation, he gives two hundred and sixty-two cases, and all were more or less benefited by this form of treatment.

ART. IX.—*Trials of a Public Benefactor, as Illustrated in the Discovery of Etherization.* By NATHAN P. RICE, M.D. New York: Pudney & Russell, 1859, pp. 460.

IT appears, from a card prefacing this work, that the author was encouraged in its preparation and publication by several of our most prominent medical men, officiating as the Executive Committee of the Physicians and Surgeons of New York.* After premising that the author is fully competent to the task, they add: "A work on this subject, executed with candor, with becoming accuracy of detail, and with completeness, must be not only of temporary, but also of permanent interest, both to the profession and the public."

In our notice of this work, we shall pass over such portions as are not of a strictly scientific character, and confine our attention entirely to matters of professional interest; nor shall we attempt in this brief space to discuss, much less to solve, the mooted questions arising out of the numerous claims to the honor of discoveries in anæsthesia. Taking the work before us with its high sanction as our guide, we shall present briefly the facts relating to Dr. Morton's career, as collected from various sources by Dr. Rice.

From this narrative it appears that Dr. Morton's attention was called to the subject of anæsthesia not by observing the effects of any benumbing agent, but from the necessity he experienced in the practice of his profession, of having the power to extract teeth without pain. To accomplish this object, opium was resorted to in large doses, and alcoholic liquors, but with indifferent success.

In July, 1844, while operating upon a sensitive tooth, he applied to the gum a little common sulphuric ether, the benumbing effects of which, when thus locally employed, though he formerly knew, now exceeded his expectations, and the thought occurred to him, that if the whole system could thus be rendered insensible, his object would be accomplished. The recollection of the inhalation of nitrous oxide gas and ether in small quantities for amusement at school, led him to experiment upon animals and birds, but his success did not warrant his expectations.

---

* *This card is signed by* DRS. JOHN WATSON, WILLARD PARKER, JOHN W. FRANCIS, GURDON BUCK, JAMES R. WOOD, VALENTINE MOTT, JOSEPH M. SMITH.

During the following winter, Dr. Morton witnessed the exhibition of nitrous oxide gas, in the Harvard Medical School, for the purpose of extracting a tooth, but the operation was not wholly successful. It, however, had the effect to stimulate him in the pursuit of his favorite object, and in his various studies and inquiries he gathered many useful facts, leading finally to the settled conviction in his own mind, that sulphuric ether could be administered by inhalation to the point of complete anæsthesia. In June, 1846, Dr. Morton seems to have first obtained success on administering sulphuric ether to a dog; it became completely insensible to all external violence during inhalation, but soon recovered consciousness on the removal of the ether. But it was not until the 30th of the following September that he produced such complete anæsthesia in the human subject that an operation was performed without pain. This case occurred after having himself inhaled ether to complete insensibility, and is thus detailed by Dr. Morton : "Delighted with the success of this experiment, I immediately announced the result to the persons employed in my establishment, and waited impatiently for some one upon whom I could make a fuller trial. Toward evening, a man residing in Boston came in, suffering great pain, and wishing to have a tooth extracted. He was afraid of the operation, and asked if he could be mesmerized. I told him I had something better, and saturating my handkerchief, gave it to him to inhale. He became unconscious almost immediately. It was dark, and Dr. Hayden held the lamp while I extracted a firmly-rooted bicuspid tooth. There was not much alteration in the pulse, and no relaxation of the muscles. He recovered in a minute, and knew nothing of what had been done to him. He remained for some time talking about the experiment. This was on the 30th of September, 1846. This I consider to be the first demonstration of this new fact in science. I have heard of no one who can prove an earlier demonstration. If any one can do so, I yield to him the point of priority in time." Several other cases followed in quick succession, and the matter being made public through the newspapers, these operations were attended and witnessed by several prominent medical gentlemen.

At this point in his narrative Dr. Rice introduces an interesting sketch of anæsthesia, from the first mention of its occurrence in the human subject to the time of its complete elucidation. In the history of all discoveries we may detect the foreshadowing of the great event often centuries in advance, and not unfrequently some ardent adventurer has blindly grasped the secret clue, but has failed to follow it to its source. So anæsthesia, local and general, by gases inhaled, and infusions drank and applied, has been known from the earliest periods of human history, but it was reserved to the restless, inventive and inquisitive genius which characterizes the sciences of the present century, to wrest from nature this hidden blessing, and bestow it upon its rightful recipient—man.

According to Dr. Rice, the 16th day of October, 1846, is rendered memorable by the first public exhibition of sulphuric ether as an anæsthetic agent in surgical operations. This event occurred in Massachusetts General Hospital, in a patient of the late Dr. John C. Warren, and is thus related in the records of that hospital :

"This case is remarkable in the annals of surgery. It was the first surgical operation performed under the influence of ether. Dr. Warren had been applied to by Dr. Morton, a dentist, with the request that he would try the inhalation of a fluid, which he said he had found to be effectual in preventing pain during operations on the teeth. Dr. Warren, having satisfied himself, that the breathing of the fluid would be harmless, agreed to employ it when an opportunity presented. None occurring in private practice within a day or two, he determined to use it on this patient.

"Before the operation began, some time was lost in waiting for Dr. Morton, and ultimately it was thought he would not appear ; at length he arrived, and explained his detention, by informing Dr. Warren, that he had been occupied in preparing his apparatus, which consisted of a tube connected with a glass globe. This apparatus he then proceeded to apply, and after four or five minutes, the patient appeared to be asleep , and the operation was performed as above described. To the surprise of Dr. Warren, and the other gentlemen present, the patient did not shriek or cry out ; but during the insulation of the veins, he began to move his limbs and utter extraordinary expressions. These movements seemed to indicate the existence of pain, but after he had recovered his faculties, he said he had experienced none, but only a sensation like that of scraping the part with a blunt instrument, and he ever after continued to say he had not felt any pain. The result of this operation led to the repetition of the use of ether in other cases, and in a few days its success was established, and its use resorted to in every considerable operation in the city of Boston and its vicinity."

Several minor operations followed, equally successful, and on the 7th of November, amputation through the thigh was performed upon a female anæsthetized, without pain or ill effect. Thus was established beyond a peradventure this important fact, that sulphuric ether may be administered to the human subject to the extent of totally obliterating all sensibility without ill consequences. A greater event in the history of man can scarçely be conceived. The venerable Dr. Warren thus gave eloquent utterance to his sentiments :

"A new era has opened on the operating surgeon. His visitations on the most delicate parts are performed, not only without the agonizing screams he has been accustomed to hear, but sometimes in a state of perfect insensibility, and, occasionally, even with an expression of pleasure on the part of the patient. Who could have imagined that drawing a knife over the delicate skin of the face, might produce a sensation of unmixed delight ? That the turning and twisting of instruments in the most sensitive bladder, might be accompanied by a delightful dream ? That the contorting of anchylosed joints should coexist with a celestial vision ? If Ambrose Paré, and Louis, Dessault, and Cheselden, and Hunter, and Cooper, could see what our eyes daily witness, how would they long to come among us, and perform their exploits once more.

"And with what fresh vigor does the living surgeon, who is ready to resign the scalpel, grasp it, and wish again to go through his career under the new auspices. As philanthropists we may well rejoice that we have had an agency, however slight, in conferring on poor suffering humanity so precious a gift. Unrestrained and free as God's own sunshine, it has gone forth to cheer and gladden the earth ; it will awaken the gratitude of the present, and of all coming generations. The student, who,from distant lands or in distant ages, may visit this spot, will view it with increased interest, as he remembers that here was first demonstrated one of the most glorious truths of science."

The news of this great discovery now spread far and wide, and congratulatory notices filled the public prints. It was hailed abroad with the greatest possible enthusiasm, and on the 18th of December, was first successfully employed in London. The *Illustrated London News* of January 9th, 1847, contains the following :

"Last week the first experiment was made in this country, of employing the inhalation of the vapor of sulphuric ether as a means of rendering surgical operations painless. The application is of American origin, and was first introduced, a few months since, by Dr. Morton, a dentist of Boston, United States, by whom it was communicated to Dr. Boot, of Gower street. By this gentleman the discovery was described, on the 17th of last month, to Mr. Robinson, the surgeon dentist, also of Gower street, who, on the following day, operated upon a young lady, thrown into sleep by the inhalation, during which a molar tooth was extracted from her lower jaw. The inhalation occupied a minute and a half, and the patient's recovery from sleep another minute. Dr. Boot questioned her respecting the tooth, and she expressed her great surprise on finding that it was removed. She said that all she had felt was merely a sensation of cold around the tooth—a sensation which was caused, perhaps, by the coldness of the extracting instrument."

The London *Lancet* said of the discovery : "The discovery of Dr. Morton—more striking to the general than to the scientific mind—will undoubtedly be placed high among the blessings of human knowledge and discovery. That its discoverer should be an American, is a high honor to our transatlantic brethren ; next to the discovery of Franklin, it is the second and greatest contribution of the New World to science, and it is the first great addition to the medical art. Dr. Morton deserves, if his discovery stands the test of time, the gratitude and reward of every civilized people and government upon the face of the earth."

Liston, wrote on the 21st of December: "I tried the ether inhalation to-day, with perfect and satisfactory results. It is a very great matter to be able thus to destroy sensibility, to such an extent, without apparently a bad result. It is a fine thing for operating surgeons ; and I beg to thank you sincerely for the early information you were so kind as to give me of it." Sir James Clarke, in speaking of this case of amputation, performed by Liston after the administration of ether, said : "It is really a marvellous thing." Richard Bright forwarded the news to Guy's Hospital, "that no time might be lost in affording so great a relief to any who might be in the unfortunate condition of being obliged to undergo a serious operation."

Prof. Miller, of Edinburgh, said "On the 23d of December, 1846, it was my privilege to read a letter in this class-room, from the late Mr. Liston, announcing in enthusiastic terms, that a new light had burst on surgery, and that on mankind a large boon had been conferred. The letter conveyed the writer's earliest and most lively impressions of a subject as startling as it was new; and there was a large-hearted generosity about it that was sure to meet with a suitable response in all right-beating hearts. The subject was anæsthesia; and its first sound had come from across the Atlantic. It fell on no dull or idle ear. It was taken up, tried, and speedily reëchoed, and in a few days it filled the island. Mr. Liston struck the key-note, and a pealing note it was. We followed here with less power, perhaps, but we hope, in tune—well pleased to find, that high as the note at first seemed to be, it was still within reach of an ordinary compass. The profession were surprised, excited, charmed in the mass."

As early as the 21st of December it was used in Paris, first by M. Jobert (de Lamballe) and afterwards, by Malgaigne. On the first of February, Velpeau and Roux declared in the presence of the two Academies, that the discovery "was a glorious triumph for humanity." Such is a brief sketch of the discovery of the anæsthetic properties of sulphuric ether, its final publicity and reception by the world, as given in this volume. Unfortunately the work does not conclude with the chapter which announces the triumph of anæsthesia. A long and tedious sequel follows, which we have neither the time, nor space, nor heart to analyze. It is a record of the struggles of rival claimants for the honor of giving to the world this new fledgling of science. which finds an analogy in the early history of nearly every discovery. To assertion and asseveration succeed calumniation and detraction. Fact and fiction, truth and error, are so intermingled that the scientific world even is bewildered, and at a loss on whom to bestow the meed of praise. But time, which assuages all human passions, and finally assigns to pretension and true merit, their proper places, will give to the benefactor of his race his appropriate niche in the Temple of Fame.

In Chapter X., Dr. Rice details the history of the Patent which Dr. Morton secured. The following considerations led to this step.

1st. He wished to make such modifications as experience might suggest as regards the method of exhibition.

2dly. He wished to instruct a suitable number of competent persons, who, when wanted, could go to any part of the country and administer it themselves, until its merits were fully established.

3dly. He wished to prevent its being at its infancy brought into dispute or doubt, by ever being used at the hands of injudicious, or unskilled persons; for, to quote from one of his private circulars, he knew that "asphyxia and etherization are two different things."

Dr. H. J. Bigelow, of Boston, thus comments upon this act: "This was not done without mature consideration on his part, and after conferring with several upon whose judgment he relied. The objections which could be made against this by some, bear against Dr. Morton only on the broad abstract ground that any discovery which can be made conducive to the physical well-being of mankind, should be freely and gratuitously thrown open to it. Laws have been passed by medical societies to enforce this upon their members; but this did not affect the case of Dr. Morton, as he was not then a member of any medical society.

"No one will deny that he who benefits the world should receive from it an equivalent. The only question is, of what nature shall the equivalent be? Shall it be voluntarily ceded by the world, or levied upon it? For various reasons, discoveries in high science have been usually rewarded indirectly by fame, honor, position, and occasionally, in other countries, by funds appropriated for the purpose. Discoveries in medical science, whose domain approaches so nearly that of philanthropy, have been generally ranked with them; and many will assent with reluctance to the propriety of restricting, by letters patent, the use of an agent capable of mitigating human suffering. There are various reasons, however, which apologize for the arrangement which I understand to have been made with regard to the application of the new agent:

"1st. It is capable of abuse, and can readily be applied to nefarious ends.

"2d. Its action is not yet thoroughly understood, and its use should be restricted to responsible persons.

"3d. One of its greatest fields is the mechanical art of dentistry, many of whose processes are by convention secret, or protected by patent rights. It is especially with reference to this art, that the patent has been secured."

It does not seem, however, to have been Dr. Morton's intentions to restrict the use of ether. It was freely offered to the Massachusetts General Hospital, and other institutions, and it was even used in the U. S. Army without regard to the patent. Dr. Morton's friends desiring to see him properly rewarded, and all restrictions removed, petitioned Congress to purchase the patent.* This movement was the beginning of a new act in the drama.

---

* *To the Senate and House of Representatives of the United States of America, in Congress assembled.*

"The undersigned, physicians and surgeons of the Massachusetts General Hospital, beg leave to represent—

"That, in the year 1846, a discovery was made in the city of Boston, by which the human body is rendered insensible to pain, during surgical operations, and during other serious and violent affections, by means of the vapor of ether inhaled into the lungs;

"That a patent for this discovery was taken out by two citizens of Boston, by whom the first satisfactory experiments on the prevention of pain by this means had been made; and the first capital operations, conducted under the influence of this agent, were performed in the Massachusetts General Hospital, by the surgeons of that institution;

The fierce controversy which has grown out of this discovery, has principally centered upon the efforts of Dr. Morton to obtain a pecuniary remuneration from Congress. Three times his claims, as the discoverer of anæsthesia, have been laid before that body, and pressed with the highest medical * and legal influences. To the voluminous

---

"That the success of this method of preventing pain has been abundantly and completely established by one hundred and fifteen operations performed in said hospital during the last year, and by a still greater number out of it in the city of Boston.

"And, in all cases within the knowledge of the undersigned, it has greatly mitigated, or wholly prevented, the pain, when skillfully administered, and in no case has any fatal or disastrous consequence followed its use, within their observation; and although inconveniencies and temporary disturbances of the nervous system have sometimes followed its application, yet these are exceptions to the general rule, and are not more common than those which result from the employment of other powerful medicinal agents, and are incomparably less distressing than the evils they are employed to obviate.

"The undersigned have reason to believe, that, since the introduction of this process, some thousands of persons have inhaled ether in Boston and its vicinity, with impunity and benefit; that its value is already recognized, and its employment introduced into most parts of Europe; that the use of the process ought to be, and, by judicious arrangements, probably will be, extended into all parts of the United States; and that no discovery in medical science, during the present century, has relieved as much suffering, and conferred so great a benefit on humanity, as the discovery of the power and application of ether.

"The undersigned are aware, that the power of ether to produce insensibility, and even death, when improperly used, was known in Europe many years ago. They are also aware, that other aëriform bodies have been experimented on, and the vapor of ether itself unsuccessfully tried, by other individuals, in surgical operations; but they are satisfied, that the safety of the process, and the effectual mode of applying it, were first made known in Boston, in 1846.

"Understanding that the use of this important discovery is now restricted by letters-patent granted from the office of the Secretary of State, and believing that it is the policy of wise governments to diffuse among their constituents the blessings of such discoveries as tend to alleviate human suffering, and, at the same time, to reward those who have conferred such benefits upon the world—the undersigned respectfully pray, that such sums as shall be thought adequate may be paid by the government of the United States to those persons who shall be found, on investigation, to merit compensation for the benefit conferred on the public by this discovery, and on condition of the relinquishment by them of any patent right they may hold restricting its use.

(Signed)

"JOHN C. WARREN, JACOB BIGELOW, GEO. HAYWARD, ENOCH HALE, S. D. TOWNSEND, JOHN D. FISHER, H. I. BOWDITCH, O. W. HOLMES, J. MASON WARREN, SAMUEL PARKMAN, HENRY J. BIGELOW.

"Boston, *Nov.* 20, 1847."

* The following memorial was presented to Congress:

"*Memorial to the honorable the Senate and House of Representatives of the United States in Congress assembled:* The undersigned hereby testify to your honorable body, that, in their opinion, Dr. William T. G. Morton, first proved to the world, that ether would produce insensibility to the pain of surgical operations, and that it could be used with safety. In their opinion, his fellow men owe a debt to him for this knowledge. Wherefore, they respectfully ask a recognition by Congress of his services to his country and to mankind.

"John C. Warren, M.D., George Hayward, M.D., S. D. Townsend, M.D., J. Mason Warren, M.D., S. Parkman, M.D., Henry J. Bigelow, M.D., Henry S. Clark, M.D., Jacob Bigelow, M.D., Oliver W. Holmes, M.D., Henry I. Bowditch, M.D., D. Hum-

documentary evidence which was thus accumulated, we refer all who desire to study the questions raised and discussed by rival claimants. It is sufficient for our purpose to state, that Dr. Morton failed to obtain remuneration from Congress, although his claims were acknowledged and sustained by the most eminent men. The question finally turned upon the validity of the patent, and his rights under it. The delay, perplexities, and embarrassments attending these investigations have resulted in a practical abandonment of the effort to obtain remuneration from Government.

The expenses attending the experiments with ether, the loss of time, and the efforts to establish its introduction, and maintain his claims to the honors and awards of the discovery of anæsthesia, appear not only to have exhausted the pecuniary resources of Dr. Morton, but to have involved him in embarrassing and harassing financial difficulties. To relieve him of these, and to bestow that reward which Government acknowledged due, but withheld, the citizens of Boston have inaugurated a movement designed to establish a "national testimonial," consisting of voluntary contributions to a fund in behalf of Dr. Morton,*

---

phrey Storer, M.D., M. S. Perry, M.D., James Jackson, M.D., George C. Shattuck, M.D., John Jeffries, M.D., Edward Reynolds, M.D., Walter Channing, M.D., John Ware, M.D., John Homans, M.D., Wm. J. Dale, M.D., John L. Fox, M.D., Wm. Ingalls, M.D., S. L. Abbott, M.D., Henry W. Williams, M.D., M. H. Childs, M.D., R. W. Hooper, M.D., George A. Bethune, M.D., Edward Reynolds, M.D."

Signed also by nearly all the members of the Mass. Med. Soc.

* The following appeal forms the basis of this movement: "The power of etheric vapors to produce a safe insensibility to pain during surgical operations, and on other occasions of great physical suffering, is one of the most beneficent discoveries that has been conferred upon the human race. It is generally conceded that Dr. W. T. G. Morton, of Boston, was instrumental in presenting this fact to the world. Nearly the whole of the medical profession of this city, in the midst of whom the discovery was made, together with other bodies of competent persons who have investigated its origin, have, after careful scrutiny, concurred in assigning this merit to Dr. Morton, and public opinion has long since affirmed their verdict.

"It is not necessary to enter in detail into the circumstances which have prevented Dr. Morton from receiving any pecuniary benefit from this discovery. The fact is certain that Dr. Morton has been an instrument, under Divine Providence, of introducing to the world one of the most remarkable discoveries of this or any other age, and that he has received no reward for it, but the consciousness of having done so. We are sure that we interpret the feelings of thousands, when we say that a substantial national memorial should be presented to Dr. Morton. . . . . We think that the people of the United States, acting individually, should do what their government has neglected, or been unable to do. National testimonials, established by the voluntary contributions of individuals, have been adopted in all countries, to mark the public sense of services to the human family, especially when such services have reflected honor and distinction upon the country where they have been performed.

"We propose that a national subscription be instituted, the avails of which shall be paid into the hands of Thomas B. Curtis and Charles H. Mills, Esqrs., as Trustees—to be held, appropriated, and invested upon such trusts, and for such uses, for the benefit of Dr. Morton, as the trustees may determine.

"James Jackson, Jacob Bigelow, S. D. Townsend, John Jeffries, Edward Reynolds, John Homans, M. S. Perry, O. W. Holmes, John Ware, George Hayward, J. Mason Warren, Henry J. Bigelow, Charles G. Putnam, Richard H. Dana, jr., The subscriptions in Boston have been large and numerous, and heading the medical institutions, the Massachusetts General Hospital subscribed $1,000.

A similar appeal has been issued in this city, indorsed very generally by the medical profession, and several of our institutions have subscribed liberally to this fund.*

Alexander H. Vinton, S. K. Lothrop, John B. Fitzpatrick (Bishop of Boston), William H. Prescott, N. Adams, Rufus Choate, Charles P. Curtis, F. C. Loring, G. S. Hillard, William Dehon, Benjamin Peirce, F. D. Huntington, Henry W. Longfellow, Jared Sparks, R. B. Forbes, P. W. Chandler, Alexander H. Rice, Robert C. Winthrop."

* The following extracts are from the appeal of the medical profession of New York: "The first great triumph of placing in the hands of the profession an agent capable of rendering the patient safely, and, at will, utterly insensible to the stroke of the surgeon's knife, was in detecting and establishing by experiment the anæsthetic powers of sulphuric ether. For this discovery the world is indebted to Dr. Wm. T. G. Morton, of Boston. Whatever may have been the steps preliminary to this remarkable discovery, Dr. Morton's claim to it is established beyond all controversy, and his merit, in this respect, with those who have taken the trouble to inform themselves on the subject, can be no longer a question of dispute. . . . . . .

"In view of these advantages from the use of anæsthetics, we feel that Dr. Morton—the first to demonstrate their safety and efficiency, and to establish them in general practice—has conferred a boon upon humanity as imperishable as it is important, and one of such a character as to entitle him to rank among the benefactors of mankind.

"As members of the medical profession of the city of New York, and as physicians and surgeons to the various hospitals and infirmaries in this city, and its vicinity, we therefore rejoice to learn that a movement has been commenced by our professional brethren and other gentlemen of Boston, to establish a national testimonial, by voluntary subscription, for the benefit of Dr. Morton. In this movement, after full deliberation and consultation among ourselves, we are ready to participate in accordance with the plan of those who originated it, which plan is set forth by the gentlemen of Boston in their appeal.

"Under governments more arbitrary and restrictive than our own, but more capable of meeting the claims of science, the awards of merit are not usually left, as with us, to the bounty of private individuals. Discoveries and improvements of infinitely less importance to science or humanity than that for which we are indebted to Dr. Morton, are, at the courts of Europe, promptly met by national honors and emoluments.

"In our own country, it is true, the national government, after carefully investigating Dr. Morton's claims, has acknowledged the benefit he has conferred upon it, but has nevertheless failed as yet to supply the recompense.

"What the government, in this respect, has failed to do, it is to be hoped, for the credit of the American name, and from the noble individual examples already set, that the discerning and liberal people of the United States will not leave entirely unaccomplished."

This appeal was signed by Drs. Valentine Mott, John W. Francis, Willard Parker, Thomas Cock, etc.; by the physicians and surgeons of all the medical institutions of the city; by the professors of the several medical colleges, and by the following members of the Academy of Medicine:

President—J. P. Batchelder, M.D. *Vice Presidents*—John Watson, M.D., Wm. H. Van Buren, M.D., S. Conant Foster, M.D., C. E. Isaacs, M.D. *Recording Secretary*—C. T. Heywood, M.D. *Domestic Corresponding Secretary*—S. T. Hubbard, M.D. *Treasurer*—James O. Pond, M.D. *Librarian*—Samuel Rotton, M.D. *Trustees*—Wm. W. Blakeman, M.D., Ed. L. Beadle, M.D., Benj. Ogden, M.D. *Assistant Secretary*—F. U. Johnson, M.D. *Resident Fellows*—B. F. Barker,

The work concludes with an explanation of the circumstances under which Dr. Morton has recently commenced a suit against the United States Government for the infringement of his patent, in the person of the Surgeon of the Chelsea Hospital, Boston. This suit was brought by advice of President Pierce, with a view to test the patent, and thus force the Government to purchase it, as was originally proposed.

We have thus presented briefly the facts brought forward in this volume, relating to the discovery of anæsthesia by sulphuric ether, and its promulgation to the world. We did not enter upon this review as controversialists, and we rise from it with the simple conviction that if Dr. Rice has given us a faithful and unimpeachable narrative, his work is not inaptly termed the TRIALS OF A PUBLIC BENEFACTOR.

BIBLIOGRAPHICAL NOTICES.

ART. X.—*The Transactions of the American Medical Association.* Vol. xi. Philadelphia, 1858, pp. 1027.

THE *Transactions* have this year made their appearance somewhat tardily, but this is due evidently to the great size of the volume, and the difficulty that must attend the collection and publication of papers by authors so widely scattered. Indeed this repletion of papers and reports is beginning to be a serious matter, and demands the discriminating hand of editorial censorship. While the utmost liberality should be exercised towards contributors, the Committee on Publication should not feel obliged to insert every paper which is placed in their hands. This annual volume should contain only the most valuable and elaborate productions, while the papers which are of less permanent value should find publicity through the medium of the periodical press. As a whole, however, we regard this volume as one of the most valuable in the series of Transactions. We have not space to notice the individual papers at this time, but shall again recur to them.

M.D., Gurdon Buck, M.D., H. D. Bulkley, M.D , F. J. Bumpstead, M.D., Thomas Cock, M.D., Thomas F. Cock, M D., J. J. Crane, M.D., George T. Elliot, M.D., T. C. Finnell, M.D., J. W. Francis, M.D., J. P. Garrish, M.D., C. R. Gilman, M.D., J. H. Griscom, M.D., T. M. Halsted, M.D., E. Harris, M.D., J. H. Hinton, M.D., E. Lee Jones, M.D., B. W. McCready, M.D., W. Parker, M.D., G. A. Sabine, M D., L. A. Sayre, M.D., J. M. Sims, M.D., C. D. Smith, M.D., J. M. Smith, M.D., Mark Stephenson, M.D., I. E. Taylor, M.D., T. G. Thomas, M.D., W. H. Van Buren, M.D., Isaac Wood, M.D., J. R. Wood, M.D., James Anderson, M.D., E. Acosta, M.D., E. H. Davis, M.D., A. K. Gardner, M.D., Edward Delafield, M.D., Joel Foster, M.D., J. C. Beales, M.D., R. W. Barry, M.D., H. W. Brown, M.D., J. C. Forrester, M.D., H. S. Downs, M.D., F. S. Edwards, M.D., F. Elliot, M.D., R. Pennell, M.D., T. W. Richards, M.D., A. Underhill, M.D., Joseph Wooster, M.D., J. W. S. Gouley, M.D., E. H. Janes, M.D., C. Henschel, M.D., A. Gescheidt, M.D., A. N. Gunn, M.D., William H. Maxwell, M.D., E. Hall, M.D., Jared Linsly, M.D., John McClelland, M.D., William Minor, M.D., Joseph Martin, M.D., J. W. Ranney, M.D., John Priestly, M.D., Alex. H. Stevens, M.D., W. C. Livingston, M.D., Stephen Smith, M.D., George Lewis, M.D., James D. Fitch, M.D., Charles A. Budd, M.D., N. C. Husted, M.D., Thos. W. Horsfield, M.D.

Art. XI.—*Elements of Pathological Anatomy.* By S. D. Gross, M.D., Prof. of Surgery in the Jefferson Medical College of Philadelphia, etc. etc. Third edition, modified and thoroughly revised. Illustrated by three hundred and forty-two engravings on wood. Philadelphia: Blanchard & Lea, 1857.

It was our purpose to present a complete review of this volume, but being disappointed we shall content ourselves with the simple announcement of a new edition. The third edition appears almost as a new work, so completely has it undergone revision. While much has been omitted from this edition as not properly belonging to a work on pathology, much has been added relating to recent improvements in this branch of medicine. The work is worthy of the patronage of the profession.

Art. XII.—*A Treatise on the Pathology of the Urine, including a Complete Guide to its Analysis.* By J. L. W. Thudichum, M.D., late Physician to the St. Pancras Royal Dispensary, etc. With 7 plates. London: John Churchill, 1858, pp. 429.

We have here a work without preface or introduction, and realizing the remark of a shrewd critic, that every book should explain within itself the occasion of its publication.

It is divided into forty-six chapters, each being devoted to the study of some special ingredient of urine, either in health or disease. It must not be inferred from the title that it is a pathological work, or a treatise upon the various diseases characterized by variations of the normal constitution of urine. The object of the author seems to have been to prepare a work which should embrace the history, the chemical composition, the nature, and, finally, every variety of test for the normal and abnormal constituents of urine. The pathological indications of the ingredients of urine are noticed, but without comment. The volume is well illustrated.

To the student of organic chemistry and microscopy this work will prove most valuable, while the practitioner who is expert in chemical manipulations will derive from it whatever aid he may seek. We commend it as the most complete work on the urine extant.

Art. XIII.—*Outlines of a Course of Lectures on the Principles and Practice of Surgery, delivered by* E. Geddings, M.D., Prof. of Surgery in the Medical College of the State of South Carolina. Prepared by T. S. Waring, M.D., and Samuel Logan, M.D., from Notes taken during the Course. Published with the consent of, and revised by Professor Geddings. Charleston, 1858, pp. 560.

Simultaneously with the appearance of this work it was announced that Prof. Geddings had retired from the Charleston school, and from the practical duties of his profession. This volume must therefore be considered his final contribution to that department of medical science which he has so assiduously cultivated, and in which he has gained eminence.

In looking over the volume we must confess to a feeling of disappointment, which is greatly heightened when we recall the valuable papers which the author has heretofore contributed to our surgical literature. We have in this large, and well printed octavo, a course of lectures on the theory and practice of surgery, differing in nothing from our ordinary text-books on that subject, except, perhaps in the absence of illustrations, and the almost entire freedom from any original views in regard to the theory and practice of surgery. We fear Prof. G. yielded too readily to the solicitations of his ambitious editors, and did not consult his better judgment.

What the profession requires at his hand is a work embracing the results of his experience, which has been great and varied. If he would add to the sum of our knowledge, let him place on record the results of his treatment of the various surgical diseases. In this way alone can he answer the just expectations of his brethren.

ART. XIV.—*The Pathology and Treatment of Stricture of the Urethra, and Urinary Fistulæ.* By HENRY THOMPSON, F.R.C.S., M.B., London, Assistant Surgeon to University College Hospital, etc., second edition, much enlarged and revised. London: John Churchill, New Burlington street, 1858, pp. 426.

THE first edition of this work appeared as the Jacksonian Prize Essay for the year 1852, the prize being awarded by the Council of the Royal College of Surgeons of England. According to the conditions of this award, the author had no power to amend, or enlarge the original copy, but was obliged to issue it as at first presented. Notwithstanding this disadvantage, the first edition was very favorably received. The present edition has undergone a careful revision, several of the chapters having been partially rewritten and greatly extended. It may now be regarded as the most complete treatise on stricture of the urethra in our language.

ART. XV.—*A Treatise on Diseases of the Air-Passages, etc., etc.* By HORACE GREEN, M.D., LL.D. Fourth edition, revised and enlarged, with an appendix. New York: Wiley & Halstead, 1858, pp. 348.

THE appendix to the fourth edition of this work constitutes its principal improvement, and is an interesting feature, as it contains an epitome of the literature of topical medication of the air-passages.

ART. XVI.—*The Science and Art of Surgery, being a treatise on Surgical Injuries, Diseases, and Operations.* By JOHN ERICHSEN, Prof. of Surgery and Clinical Surgery in University College, etc. An improved American edition, from the second, enlarged and carefully revised London edition. Illustrated by four hundred and seventeen engravings on wood. Philadelphia: Blanchard & Lea, 1859, pp. 996.

The treatise of Mr. Erichsen has deservedly been one of the most popular surgical works issued from the American press. It is at once more comprehensive in design, and more accurate in detail than any other work of the kind. The second edition is enlarged and improved, and is a mirror of the surgical science and art of our times.

Art. XVII.—*A System of Human Anatomy, general and special.* By Erasmus Wilson, F.R.S. A new and improved American, from an enlarged London edition. Edited by William H. Gorbrecht, M.D., with three hundred and ninety-seven illustrations on wood. Philadelphia: Blanchard & Lea, 1858, pp. 616.

The present edition of this popular work on anatomy, has not only been revised and corrected, but those parts relating to Histological Anatomy, have been re-written. It is presented to the profession by the author, as a complete work on this subject.

Art. XVIII.—*Contributions to Operative Surgery, and Surgical Pathology.* By J. M. Carnochan, Prof. of Surgery in the New York Medical College, etc., with illustrations drawn from nature. Philadelphia: Lindsay & Blakiston, 1858.

This is the second number of Prof. Carnochan's work, and fully sustains the character which we had anticipated from the appearance of the first part. Its contents are: 1. *Case of Exsection of the entire ulna;* 2. *Remarks on Neuralgia of the face, with a case;* 3. *Exsection of the trunk of the second branch of the fifth pair of nerves, beyond the ganglion of Meckel, for severe neuralgia of the face, with three cases.*

Art. XIX.—*Lectures on the Principles and Practice of Physic, delivered at King's College, London.* By Thomas Watson, M.D. A new American, from the last revised and enlarged English edition. With additions by Dr. Francis Condie, M.D., with one hundred and eighty-five illustrations on wood. Philadelphia: Blanchard & Lea, 1858, pp. 1224.

The great work of Dr. Watson comes to us in such a modified and improved form that we should scarcely have recognized the original. In preparing the present edition, the author has added a large amount of original matter on subjects to which there have been recently important contributions. The opinions of so eminent an authority as Dr. Watson upon questions of theory and practice, which have recently arisen, will be eagerly sought after. One of the most striking improvements in the present volume, is the liberal insertion of wood-cuts to illustrate morbid anatomy. This work is now truly a cyclopedia of practical medicine.

An Inaugural Address, delivered before the New York Academy of Medicine, Feb. 3, 1858. By J. P. BATCHELDER, M.D.—This address, delivered on the accession of the author to the presidency of the Academy of Medicine, is a most sensible and timely production. The topics discussed are the mutual obligations, relations and duties of the Academy and the profession, and the duty of the Academy to itself. The duties of the Academy are, the promotion of the scientific, the moral, and the educational interests of the profession ; these duties it is nobly discharging, and the profession owe the Academy in turn that devotion to individual duties which alone can give it real prosperity and success ; and, finally, the Academy owes it to itself to obtain a permanent home. This fact Dr. B. urges with great force, and advises the immediate consideration of plans for building. No man has labored more zealously to advance the Academy of Medicine than its late President, and from none has it received more wise and well-considered suggestions.

The Mott Surgical and Pathological Museum.—The illustration of morbid anatomy by a well regulated and complete museum, is a necessity of which every educated physician feels more or less constantly the need. And when we consider what fruits such collections have already yielded abroad, and what immense and untiring labor is necessary to their preparation, we can but regard the man who resolutely sets to work, and through a long life devotes the leisure hours of a toilsome and harassing profession to the drudgery of preparing morbid specimens for a museum, as a great benefactor. For fifty years of active and most exacting professional labors, Dr. Mott has diligently pursued the one great object of leaving to posterity the results of his experience in the noble museum which now adorns the halls of the University Medical College. He states in the preface that "it comprises over a thousand specimens, and among them there is very little redundancy. Almost every one was made by my own hands ; some of them as long ago as when I was a student in London, in 1807." We quote this latter statement with infinite pleasure, as it shows by what toil and perseverance Dr. Mott has achieved a reputation to which many aspire but few will attain. This fact is an invaluable legacy to the medical student who heeds it.

The catalogue, though intended as a guide to students attending the University, is of value to the general practitioner, as the history of many specimens are given with much detail. It contains, indeed, a careful record of the most important operations of the author, with practical remarks upon points of interest.

We are not altogether pleased with the preparation of the catalogue, but being aware of the difficulties and perplexities attending the arrangement of such collections, we shall not venture to be critical.

Silver Sutures in Surgery. The Anniversary Discourse before the

New York Academy of Medicine, Nov. 18, 1857. By J. Marion Sims, M.D., Surgeon to the Woman's Hospital.—In this discourse Dr. Sims has departed from the custom established by his predecessors of giving a historical, ethical, or speculative lecture, and devoted the anniversary address to the elucidation of a practical subject. We commend his good taste, and hope his example may be followed. We would go farther, and suggest, that instead of a single popular discourse, the Orator be chosen with reference to the discussion of some practical subject, and be allowed one or more lectures as he may have need. Some of the most valuable monographs have thus been produced before foreign societies.

Dr. Sims enters upon the subject-matter of his discourse by a brief description of his method of treating vesico-vaginal fistula. In this connection, he takes occasion to refer to the claims of Dr. Bozeman, the inventor of the "Button Suture," and censures his conduct in no measured terms. To test the value of this modification of the clamp suture, Dr. Sims operated seven times, and reports six successive failures. He admits, however, that the cause of failure was due to the fact, that he passed the wires too far from the abraded edge, while, in the last case, he attributes his success entirely to the silver wire, and not at all to the "button."

These experiments seem to have been productive of good results, for Dr. Sims was led thereby to test the advantages of silver wire in a simple interrupted suture without either clamps, shot or button, and the result proved that used in this way, being simply twisted firmly, it answered perfectly. Dr. Sims now employs the silver wire entirely in this manner, and with uniform success.

Of the great advantage of silver wire over silk in sutures, in the general practice of surgery, Dr. Sims is deeply impressed, and he urges its adoption with all the zeal of an enthusiast. He has employed it with perfect success in plastic operations, hare-lip, scalp wounds, removal of the breast, amputations, ovariotomy, wounds of the intestines, etc. He claims that "SILVER, AS A SUTURE, IS THE GREAT SURGICAL ACHIEVEMENT OF THE NINETEENTH CENTURY," and in the following language bespeaks its future triumphs :

"I shall yet live to see the day, when the whole profession of the civilized world will accord to this simple discovery the high position of being the most important contribution as yet made to the surgery of the present century. The only thing at all comparable to it, is etherization ; and in practical results of permanent benefit, it is absolutely contemptible, when compared with those from the universal use of silver sutures in the broad domain of general surgery."

Dr. Sims concludes his discourse with an interesting sketch of the experiments by which he was led to the cure of vesico-vaginal fistula.

Ophthalmic Hospital Reports and Journal of the Royal London Ophthalmic Hospital. Edited by J. F. Streatfield. London.—We have received several numbers of this periodical, which is issued quarterly by the Royal Ophthalmic Hospital, London. It is a very ably conducted journal, and supplies to the ophthalmic surgeon a much-needed medium for obtaining the latest improvements in this department of surgery. It is divided into—1. *Facts and Observations.* 2. *Original Communications.* 3. *Quarterly Reports.* The July number contains the following original papers : *Operations for Cataract among the Natives of India*, By Wm. Martin ; *Protrusion of the Eye-ball*, by Mr. Poland ; *On the Growth of the Crystalline Lens and formation of Capsular Opacities*, by Mr. Hulke ; *Different forms of Inflammation of the Eye consequent on inherited Syphilis*, by Mr. Jonathan Hutchinson. The report of the operations on the iris, in the Ophthalmic Hospital, is highly interesting.

On Gastro-Colic Fistula. A Collection of Cases and Observations on its Pathology, Diagnosis, etc., by Charles Murchison, M.D., M.R.C.P. Assist. Physician to King's College Hospital, London, etc.—After referring to the various kinds of fistula of the digestive canal, Dr. Murchison gives the histories of 23 cases of fistula of the stomach and colon. From this summary it appears that the majority of fistulæ are the result of cancer. The symptoms of this disease followed by vomiting of feces, renders the diagnosis easy. The prognosis is fatal, unless the cause be other than cancer, as perforating ulcer.

Physiology, Pathology, and Therapeutics of Muscular Exercise, by W. H. Byford, M.D. Chicago : 1858.—As a proper kind and amount of exercise is essential to the health and vigor of our bodies, the converse is true, that the want of exercise gives rise to diseased conditions. Dr. Byford, as a rational therapeutist, has drawn from these facts many practical deductions.

Introductory Discourse to the several Courses of Clinical Instruction at Bellevue Hospital, New York, delivered on the 18*th of October*, 1858. By John W. Francis, M.D., LL.D., President of the Medical Board. New York, 1858. This discourse is mainly historical. In giving a sketch of the rise and progress of clinical teaching and anatomical and pathological investigations, Dr. Francis relates many interesting incidents in the life of distinguished members of our profession. With many of the prominent physicians and surgeons of Europe in the early part of this century, Dr. Francis enjoyed an acquaintance, and hence his reminiscences have all the freshness of an immediate interview with the persons introduced. With the early history of the medical profession of our city, Dr. Francis has the most intimate knowledge. While no living physician has an equal familiarity with the lives of our early physicians, no one has in an equal degree the happy facility of portraying their characters. It is a source of gratification to us that Dr. Francis seizes these opportunities to place on record such fragments of our medical history as he alone is in possession of. The address is very neatly printed by the students of the several schools, and is prefaced by a beautiful and accurate steel engraving of the distinguished author.

A new Method of treating Exstrophy of the Bladder, by Daniel Ayres, M.D., LL.D. Brooklyn, N. Y., 1859. This pamphlet is a reprint from the *Med. Gaz.*, and details the successful treatment of a case of exstrophy of the bladder.

PART THIRD.

MEDICAL RETROSPECT.

Report on the Progress of Obstetrical Science and Diseases of Women; prepared for the New York Journal of Medicine. By E. Noeggerath, M.D., Physician to the Female Department of the (Canal street) German Dispensary of the City of New York.

(*Continued from p.* 141, *Vol. VI.*)

III.—PATHOLOGY OF NON-PREGNANT WOMEN.

4. *Prof. Blair on vicarious menstruation* (*Oglethorpe Med. and Surgical Journal*, April).—The subject was a young lady of fifteen years, who never menstruated, but at each period had all the evidences of approaching menstruation, which would suddenly disappear, and she would be attacked with acute inflammation in the right eye. By appropriate treatment the patient began to menstruate freely, and was entirely restored.

5. *Prof. James P. White of Buffalo. Report of a case of inversion of the uterus successfully reduced after six months, with remarks on reduction in chronic inversion.*—The article opens with the history of a case where Dr. White reduced the inverted uterus of a woman who had been delivered eight days previously. The reduction was perfected at one trial by the method of dimpling the most prominent part of the fundus. The patient died three days afterwards. The post-mortem examination revealed no cause of death, unless the anæmic condition of the tissues may be considered as such. A second case under the author's care was reduced soon after the accident. A third case was not visited until the fifteenth day, no effort at reduction being attempted.

On the 12th of March, 1858, Dr. White was requested and saw a case of inversion of more than five months' standing, in consultation with Drs. Robinson, Reynals, Batten, and Dimick. On examination, the fundus was found just within the os externum, the body and neck of the organ occupied the vagina; the inversion was recognized as complete, and the organ scarcely larger than when in its natural position six months after delivery. The patient being placed horizontally across the bed and chloroformed, Dr. White introduced his right hand into the vagina, and firmly grasped the entire body and neck of the uterus. At the same time a large rectum bougie was carried up and also received into its palm, and held firmly in contact with the fundus of the uterus. Continuous gentle pressure was now made upon the external extremity of the bougie with the left hand, whilst the right compressed the uterine tumor. In this way the force was directed in the axis of the pelvic cavity, putting the vagina completely upon the stretch. After persevering in this effort as long as the strength of the operator could afford it, the tumor at length began to shorten at its neck, and the mouth of the uterus to push upon the upper surface of the hand. No depression of the fundus was at any time perceptible. At last the fundus passed out of the hand, and was easily pushed by the bougie through the neck of the organ up to its proper position. The full reduction of the uterus was afterwards demonstrated by the uterine sound and the speculum. The bougie was retained in the uterus till the next day by the attending physicians, and ergot given to promote tonic contraction of the uterus. The patient afterwards recovered entirely.

In concluding this highly interesting paper, Dr. White remarks that the reduction by dimpling the fundus ought to be restricted to recent cases, as in those of old standing the uterine cavity left is too small, and the organ too firm, for any depression to be made upon the walls of the fundus.—(*The American Journal for Med. Science,* July, 1858.)

6. *Dr. Warren on occlusion of the uterus—Rupture of the left Fallopian tube* (*from the records of the Boston Society for Medical Improvement. The Boston Medical and Surgical Journal,* July, 1858).—The patient had a very severe confinement about four years ago, and has never menstruated since. On examination, a large prominent tumor was found in the abdomen, and not the slightest trace of the os uteri in the vagina. Soon after the vaginal examination was over, a bloody or tarry discharge commenced to flow from the genitals, being accompanied by forcing uterine pains, and with a great diminution of the abdominal swelling, which, however, was confined only to the right lobe of the abdominal tumor, while the left portion of the swelling remained unchanged. The following day suddenly she was seized with a violent pain in the abdomen, and she died in about two days.

The post-mortem examination showed that the right lobe of the tumor had been formed by the uterus, which had emptied itself through the vagina. The left lobe consisted of the left Fallopian tube, enormously distended into a very delicate sac by the retained menstrual fluid. There was no communication between the Fallopian tube and the uterus, and the tube had ruptured and discharged its contents into the abdominal cavity, causing death.

7. *Dr. A. Mayer, Jr., on uterine and vaginal prolapsus, its treatment by Dr. Zwank's instrument, and the conditions which prevent its application* (*Transactions of the Berlin Obstetrical Society,* April, 1858. *Monatsschrift für Geburtsk.* July, 1858).—Of 300 cases of prolapsus which came under Dr. Mayer's observation since 1853, there were :

1. Of prolapsus of the vagina unconnected with prolapsus uteri, 7 cases, viz.: *a.* of prolapsus pariet. anter. vagina, 5 cases; *b.* of prolapsus par. poster., 2 cases.

2. Prolapsus vaginal with descensus uteri, 84 cases : *a.* prolapsus par. anter. vagin. et desc. uteri, 54; *b.* prolapsus par. poster. vagin. et desc. uteri, 5; *c.* prolapsus par. anter. et poster. vagin. et descens. uteri, 25.

3. Prolapsus par. anter. vaginæ, with partial prolapsus uteri, 21.

4. *a.* Prolapsus par. anter. et post. vagin. et uteri, incomplete, 151;

b. prolapsus par. anter. et post. vagin. et uteri, complete, 27. The great number of these cases is explained by the fact, that women suffering from these complaints very often do not ask for medical advice before 20 or 40 years have elapsed.

5. Prolapsus uteri (penniformis) 10.

The prolapsus was complicated with: 1. retroflexions 62 cases; 2. retroversions 39 times; 3. anteflexions 6 times; 4. hypertrophies 117, among which 59 combined with flexions.

Other complications were cystocele, rectocele, ulcerations, metritis, excrescences of the urethral orifice, prolapsus ani, oöphoritules, abdominal tumors, pregnancy. Dr. Zwank's hysterophor was applied in 203 cases. Fourteen of these women discontinued treatment because the instruments did not agree with them, producing ulcerations and pain; 2 patients removed the instrument on their own account, and sent it back without giving it a further trial; 2 preferred an abdominal supporter; and 7 cases only offered invincible difficulties to the application of the instrument. One of these suffered from a far advanced hydrops ascites. The second patient was so deformed and stiff in her limbs that it was impossible for her to move and introduce the instrument. A third one could not have an instrument for the same reason; as her arms were paralyzed. With two patients the vagina was so irritable that every instrument created violent pains after it had been borne for a short time. In two very old patients the vagina was so short and rigid that even the smallest size could not be entirely shut when introduced.

Before an instrument was applied, such complications as could be cured (metritis, hyperæmia, hyperæsthesia, ulcerations) were first removed. The greatest difficulty was experienced in the treatment of those occasional ulcerations which are located in the walls of the vagina. The application of caustics, nitrate of silver, etc., was always followed by an aggravation of the symptoms, while repeated scarifications, and the use of acid pyrolignius succeeded better, though after a considerable length of time.

Simple hypertrophies of the womb, as a general rule, did not interfere with the successful application of Dr. Zwank's instrument, while in those cases where hypertrophy and flexion of the womb were combined, the greatest difficulties presented themselves to the use of the hysterophor, such as violent back-ache, bearing down, increased painfulness of the womb, ulcerations of the labia and vagina. In these instances the womb has to be first replaced by the probe, and retained in its position for some time by a plug introduced into the vagina, after which an instrument may be tried again.

The leading point in searching for the right size of an instrument, is the space and direction of the arcus pubis, an average shape of which may be acquired by the introduction of the second or third fingers, thus establishing the distances of the two pubic bones. Very often a comparatively small instrument is required for retaining very extensive prolapsus. This remark applies also to cases of prolapsus combined with rupture of the perineum, which are very often benefited by a small instrument of Zwank, while all the other kinds failed to retain the womb in its position. Still the question, if the instrument is of a fitting size, will be lastly decided by the sensations of the patient after she has worn it for several days, after the very first disagreeable impressions of a foreign body in the vagina are overcome. If the instrument chosen is of the right size, the patient, after some days, will be scarcely aware of its presence.

Sometimes it happens that a portion of the vagina works its way beneath the anterior edge of the instrument, and appears outside the vagina. To remedy this, an instrument must be chosen, the greatest breadth of which is situated in the centre, *i. e.* where the two lateral wings are joined. By the invention of Dr. Zwank, the bloody operation, episeorrhaphy, elytrorrhaphy, the pincement du vagin, etc., have been supplanted, because by Zwank's hysterophor *almost all* cases of prolapsus are retained, of whatever shape and size they may be, provided the right instrument has been chosen. The conditions which forbid the application of Dr. Zwank's hysterophor are: carcinoma uteri; hypertrophy of the neck of the womb; very narrow, rigid vaginal walls, as often met with in very old women; large pelvic tumors; far advanced hydrops; in some very rare cases of distorted pelvis.

7. *Dr. Becquerel on neuralgia of the uterus* (*Gaz. des Hôp.*, 47, 1858).—In opposition to many physicians who consider uterine neuralgia rather as a symptom connected with pathological conditions of this organ, the author believes it to be an idiopathical disease not unfrequently met with. Its manifestations are intense, violent, lancinating, and intermittent pains, the seat of which is, in most cases, the uterus itself, from whence they are spreading, at times, to the lumbar region, hypogastrium, perineum, and fundament. The pain is generally increased by the touch. Continued and quick walking, as well as cohabitation, are apt to increase the suffering. Very often the entire nervous system shows an increased sensibility owing to the diseased state of the womb. The author distinguishes a symptomatical, a utero-lumbar neuralgia, and a neurosis of the uterus.

The course of the disease is always of a chronic character, and mostly intermittent; the duration of symptomatic neuralgia always depends upon the primitive affection. The diagnosis must be derived from digital and from specular examination; in this way material changes may be easily recognized; the neurosis must be diagnosticated by way of exclusion, its presence may be stated from the absence of organic disease and painful irradiations, the presence of the latter indicating an utero-lumbar neurosis. In regard to prognosis, it may be said that the disease is very difficult to remove in exhausted, anæmic subjects.

The treatment of symptomatic neuralgia has to be directed against the primitive disease; besides this, the neuralgia itself must be treated with the different narcotics. Of great value are the use of full baths, and in cases with a manifest intermittent character, the sulphate of quinine can be recommended. The method of Cruveilhier, who applies a mixture of linseed meal to the cervix uteri, is not praised by the author. He tries to apply the remedies to the cervical canal, or to the cavity of the womb itself, by introducing small conical rollers, formed of castor oil, gum arabic, and tannin, into the womb; after ten or twelve hours they are melted down, thus leaving the tannin to act upon the mucous membrane. This has to be repeated every third or fourth day. The author has applied, in the same way, opium, belladonna, etc., with great benefit, thus lulling, in a short time, the most violent pains. Other important remedies care old-water cures, the baths of St. Sauver, Ems, and sea bathing.

8. *Dr. G. T. Scarburgh, of Baltimore, on a peculiar case of retention of the menstrua from occlusion of the os uteri* (*The Virginia Medical Journal*, Vol. XI., No. III., September, 1858).—Mrs. H. E., a negro woman, suffered from occlusion of the os since her last unusually painful labor. On examination, a large, pear-shaped tumor was found extending from the symphysis as far up as above the umbilicus. Through the speculum the os appeared to be entirely closed by a false membrane. With a straight bistoury an attempt was made to cut through the occluding membrane, but so dense and fibrous was it, that the effort was abandoned. Recourse was next had to a sharp trocar. This, too, after many unsuccessful efforts, was also abandoned. From the external toughness of the membrane, it was deemed useless to attempt to cut through it, and no further effort was made. The patient died soon afterwards from exhaustion.

Autopsy.—The abdominal tumor was soft and fluctuating in its lower two-thirds. The abdominal walls were closely adherent to the tumor, requiring nice dissection to separate them; so were the intestines. The neck of the uterus was with great difficulty cut through, and on entering the cavity about a quart of muco-purulent fluid escaped, and lying in it was an oblong ball of coarse matted hair, about four inches in length, and two and a half inches in diameter. Attached to the walls of the cavity were found several smaller pieces of hair. The whole fundus uteri seemed to have been converted into a large cyst, which, upon being opened, was found to contain steatomatous matter, with numerous bands and some few bloodvessels traversing it in several directions.

Dr. S. is of opinion that the hair was used as a tampon to stop a post-partum hemorrhage.

(*To be continued.*)

CORRESPONDENCE.

A case of regular menstruation during pregnancy. By Frederic D. Lente, M.D.—Mrs. M., aged 20, emigrated from Ireland in 1855. Was out of health, and had suppression of the menses for several months after her arrival here. Was under my treatment, and finally became "regular," and her health thoroughly restored. Her menstrual function continued to be well performed, and during the summer of 1856 she was married to a private soldier stationed at West Point. She continued "regular" after her marriage, and retained her place as "chambermaid" in an officer's family. In October, 1857, she missed her turns for the first time since her marriage, and on December 7th following, had a full grown but delicate child, in the standing posture, while in one of her employer's rooms, where she had been performing her ordinary work. She had enlarged but very moderately, and supposed she was only a couple of months pregnant. Her lochial discharge continued abundant for a month, then ceased ; "saw nothing" for another month, then had a menstrual flow, which continued two weeks. After a month's interval, was "regular" again, and has not had her courses since, the child being now over a year old, and perfectly well. She assures me, as does her aunt also, that her "turns" came on as regular at the end of every four weeks as they did before marriage, and continued each time the usual number of days.

Occurrences of this kind, though recorded now and then, are sufficiently rare to render them worthy of notice.

Cold Spring, February, 1859.

On the treatment of varicocele by an improved method. By LEWIS A. SAYRE, M.D.—In the last number of this Journal is a case reported by Dr. Isaacs, of Brooklyn, of "*Variocele treated by exsection of a portion of the scrotum,*" which was followed by severe hemorrhage, sloughing, and very grave constitutional disturbance, and the doctor very properly asks, at the termination of the report, "*Can we not devise a better operation?*"

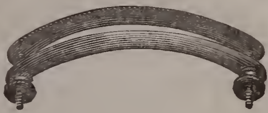
I herewith submit my instrument, devised for this very operation in 1846, a full description of which was published at the time in one of the medical journals of the city, I think the *Annalist*, edited by Dr. Roberts, and since republished in the *New York Medical Press*, December 18th, 1858.

The instrument, which was made by Mr. Tieman, consists of two pieces of steel, about four inches in length and a quarter in width, segments of a circle of about four inch radius, and retained together, in the form of a clamp, by means of small rods or pins, permanently secured at each end of one of the bars, and which pierce the opposite bar through corresponding openings. The rods are cut with a thread, and thus made into screws, and a small movable button working upon them, will cause the blades or bars to approximate to any required distance.

The bars, on their inner surface, are roughened on their convex border to prevent slipping, and from this roughened edge to the concave border the blades are levelled outward and rounded off, so as to prevent too much pressure on the scrotum when it swells during the inflammation following the operation.

In performing the operation the blades are separated, and the scrotum is drawn through to the required extent, the testicles being carefully carried before the concave surface of the clamp. Care should be taken to draw down through the instrument as much of one side of the scrotum as the other, so as to have the new cicatrix or raphé in the centre. The blades are then screwed together sufficiently tight to arrest hemorrhage, without entirely cutting off the circulation. Silver pins are then thrust through the scrotum along the outer or convex border of the instrument, at distances of every half inch, in order to retain the septum from receding, and the entire scrotum below the line of pins is then removed by a single stroke of the knife. The hare-lip suture is then thrown around each pin, and intermediate sutures are applied if deemed necessary, and the clamp thus retained in position will keep the wound in exact apposition, and in the great majority of cases union by the first intention will take place in about five days. No ligatures are required whatever, as the screws can be made to control the hemorrhage entirely.

On the following day there will be some inflammation and swelling, when the screws can be turned back a few threads, and the blades pressed apart sufficiently to allow healthy circulation and prevent sloughing, without being sufficiently free to permit hemorrhage. I have used this instrument in many cases with the happiest results.



795 Broadway.

Rupture of the uterus. By Wm. G. Meacham, M.D., Warsaw, Wyoming co., N. Y.—Upon Sunday the 23d inst., about 4 P.M., my brother, Dr. J. G. Meacham, of Warsaw, was summoned to the bedside of Mrs. Ann Jane Service of the same place, a primipara and 26 years of age. The labor progressed regularly and with no untoward symptom to the birth of the child and the delivery of the placenta immediately thereafter, at eight o'clock. But directly upon the withdrawal of the afterbirth, a severe rigor was developed which persisted for a half hour in spite of diffusive stimulants, such as brandy, carbonate of ammonia, etc., and external excitants. A dose of morphine was also administered. Soon a flagging pulse, cold extremities, and an exsanguinous and pinched countenance plainly betokened an alarming prostration, for which the loss of blood through the external genitals, by no means considerable, could but indifferently account. Incited by these symptoms, Dr. M. made diligent investigation relative to the existence of internal uterine hemorrhage, but the abdominal and vaginal touch disclosed that firmly contracted knob in the hypogastric region which removes all anxiety about the presence of that fearful hemorrhagic complication of the puerperal state. The collapse, however, continued to increase in severity, as was evidenced by failing circulation, decreasing respiratory energy and force, and diminishing superficial temperature. Diffusive stimulants were now given in larger doses and at less distant intervals, and such other internal and external restoratives were had recourse to as are ordinarily employed in the conduct of similar cases—but all to no avail. Reaction could not be effected. Dr. M. now perceiving the danger of the patient communicated his disheartening prognosis to the friends of the patient, and expressed a wish to meet some one in council. Dr. Baker of this village was thereupon called, but he could of course predict no more favorable issue to the case. The unfortunate woman lingered on until 11 o'clock, when she expired.

The following (Monday) morning my brother called at my office, acquainted me with the particulars of the case and desired me to attend the post-mortem, which he purposed instituting forthwith. I need not say, that the history of the labor which he imparted to me, and which I have just recorded, readily suggested a diagnosis of uterine rupture.

I accepted the invitation, and together with Dr. Baker, witnessed the autopsy. Upon opening the peritoneal cavity an unusual quantity of liquid was seen to occupy it, and upon ante-flexing the uterus there was observed upon the right posterior aspect of its body, just above the cervix, a portion of the peritoneal envelope, two inches square or thereabout, which differed considerably in appearance from the surrounding parts, being mottled red and purple, while they presented a pale, greyish tint. An examination of this spot disclosed a *ramollissement* of the peritoneal covering almost amounting to diffluence, for very slight friction sufficed to bare the subjacent muscular tissue. The serous membrane could also be readily dissected by the finger or the handle of the scalpel from the uterine muscular fibre for a considerable circumference around the softened central disc. At this place was discovered an opening through the uterine wall into the cavity within.

The pathological condition of that portion of the peritoneal covering of the uterus in which the rupture was observed, a condition which undoubtedly predisposed to the rupture, was palpably the result of antecedent inflammation. The patient had suffered severely for several months with pain in her back and sides, but she had neglected to apply for medical assistance. Not only was the peritoneal envelope thus softened at this spot, but the muscular tissue itself bore evidence of having sustained more or less injury from inflammation, and it is certainly presumable that an extension of diseased action may have taken place from one to the other of these adjacent tissues of the uterine wall.

I am not aware that there was any pelvic deformity or any abnormal fœtal development such as to predispose to this fearful accident, and my brother assures me that he administered no expulsive medicines with the design of expediting delivery. The rupture evidently occurred at the very close of the puerperal effort, for as the fœtus was extruded, the collapse began, and not a single after-pain was experienced. Subsequently to the severe rigor which initiated the collapse, she suffered intensely with pain, which was referred to the epigastric and hypochondriac regions, pain manifestly seated in the peritoneum and occasioned by the presence of air or the uterine fluids, or both, within the abdominal cavity. It is very questionable, if it be not incredible, that, in a condition of such vital depression, such fearful collapse, an acute inflammation could have supervened upon the rupture and been indicated by this agonizing pain. As I gather from my brother's statements, the prostration so far exceeded that which attends upon even the most violent traumatic peritonitis that a shock to the nervous system may justly be deemed the proximate cause of the fatal issue in this case.

From imperfect examination I cannot definitely say what was the source of the unusual quantity of liquid found within the peritoneal cavity. It may have been amniotic liquor, but, in order to the entrance of any considerable amount of this, we must suppose the uterine rupture to have occurred previously to, or contemporaneously with the rupture of the membranes, and this supposition the history of the accouchment does not justify. We are rather authorized in considering this liquid as a serous effusion from the peritoneum and a consequence of that chronic inflammation of the existence of which I think we have abundant evidence. Other parts of the supra-vaginal zone of the uterus than that in which the rent was discovered bore traces of previous inflammatory action.

To conclude. From the history and autopsy, I deduce the following conclusions.

1st. That the rupture occurred synchronously with the passage either of the head or of the shoulder of the fœtus through the superior strait.

2d. That a ramollissement of a part of the supra-vaginal zone of the uterus, consequent upon chronic inflammation, was the predisposing, and the uterine contractions were the exciting cause of the rupture.

3d. That the rupture was unavoidable; and,

4th. That it was irremediable.

Asarum canadense as a remedy for dropsy depending upon albuminuria. By J. R. Black, M.D., Linnville, Ohio.—Three plans of treatment for the removal of the effusion connected with Bright's disease have each a large class of advocates. No one plan can be said to have enjoyed a much higher degree of favor than another. Recently, however, the diaphoretic has obtained much vogue, and appears to be the favorite in the metropolitan hospitals. But it is open to a very important objection. The great disorder of the assimilative function, almost an invariable concomitant of this disease, is unequivocally enhanced by the medicines necessary to produce diaphoresis. Antimonials, opium, ipecac., spiritus mindereri, etc., if used even for a brief period, must add in no inconsiderable degree to the anæmic condition of the system. The second mode of treatment, consisting in the free use of hydragogue cathartics, is liable, in a more special manner, to the same objection. The third mode of treatment, that of acting upon the kidney by diuretics, has perhaps more to commend it, and is more generally resorted to than any other. But every practitioner is aware of the eccentricities and uncertainties that attend the administration of this class of agents. Oftentimes the whole of a long list of diuretics has to be resorted to ere the desired effect can be obtained. Even then they will now and then fail after engendering more or less nausea, which some of them are peculiarly apt to occasion: or in depending upon those whose therapeutical effects are more consonant with the cachectic state of the system, we will find our armaments too feeble to successfully cope with this formidable disorder. Under all these circumstances, it is extremely desirable that an agent be discovered capable of producing a more specific effect upon the kidney, and at the same time not interfere with the process of digestion and assimilation. Such a one I think I have discovered, through some remarks of the inhabitants of this section. It is, I am aware, a very common occurrence for the physician to hear from the credulous multitude long tales of the wonder-working power of some root in this or that disorder. It is perfectly true that in the great majority of instances these recitals are utterly unworthy of attention; but we ought, nevertheless, to bear in mind, that where there is chaff we should suspect some golden grains. Having frequently heard, in this way, of the great virtues of the Canada snakeroot in dropsy, my attention was not specially directed to it until one of my patients, who had for some three months suffered in an extreme degree from albuminuria and excessive effusion, asked my consent to drink some tea of this root. This patient was a middle-aged woman, who had contracted intermittent fever in Indiana, and did not get rid of it till albuminuria made its appearance in an aggravated form, some thirteen months after the onset of the fever. The urine was scanty, too frequently voided, of deficient specific gravity, and so highly albuminous as to form a gelatinous mass, on application of usual tests. By the use of the usual agents recommended in such cases, the symptoms gradually mitigated, and in some nine weeks the effusion was so far removed that locomotion was possible; but yet the improvement was so slow, the increase of renal secretion, under the administration of the most certain and suitable diuretics, was so imperceptible, that I almost despaired of ever entirely removing it. Under these circumstances, I felt ready to adopt any feasible means that might contribute in subduing the disease. Within thirty-six hours after partaking two or three times of a decoction of the snakeroot, a great increase in the renal secretion was manifested, and under its use alone the case rapidly recovered, and she is now, and has been for some two years, performing her ordinary household duties. Once or twice, during that time, the effusion has exhibited signs of returning, which were promptly counteracted by the use of this decoction.

The happy effects of this root determined me to give it another trial in this disease (which, by the way, is quite rare in this region) at the earliest opportunity. Accordingly, on the 20th September, 1858, I was requested to see Mrs. S., aged 26, widow, mother of one child, which had died almost simultaneously with its father some three months previous. In common with her husband and child, she had been suffering from dysentery, after which intermittent fever set in. The chills continued to recur at irregular intervals despite the administration of various remedies. At the time of my visit, I found her much prostrated, and laboring under a chill. Her aspect was anæmic and dingy, with general bloating of the body. The inferior eyelids bulged with their serous contents; complained of slight pain in the head and back; sleep very much disturbed; respiration at times much oppressed, with a sense of fullness in the epigastrium; tongue pale and flabby; appetite poor; occasional nausea and vomiting; pulse rather quick; alvine discharges normal in color and consistence; micturition too frequent, scanty, specific gravity 1010, quite opalescent on application of heat or nitric acid;

catamenia suppressed. Directed 4 grain doses of sulph. cinchonæ, administered in dilute tinct. ferri, to check the chills, after which the bowels to be cleared by 30 grains pulv. jalap. comp. During the administration of the cinchona the effusion rapidly increased, rendering her almost helpless. In order to determine (and, besides, having no snakeroot at hand) what effect an ordinary prescription would have upon the disease, she was put upon sps. ethr. nitrici, bitar. potassæ, with infus. diosma, as much as can be borne without too much disturbance of the alimentary canal. Five days after its use was began, thought her urine a little more abundant, although, on inquiry and examination, I was able to detect no improvement in any other respect—at least so far as the condition of the kidney and effusion were concerned. Ordered Canada snakeroot ℥iv., aquæ bullientis Oij. Boil 30 minutes, strain, and give two tablespoonfuls every four hours. After taking four doses, her urine increased to one gallon per night, and nearly the same quantity during the day. On the third day after its use, I saw her effusion rapidly disappearing; opalescence scarcely perceptible; says her flesh is very sore, and feels quite weak; that she had to diminish the dose, as it caused her to pass blood with the urine; felt no untoward symptom from the medicine, but was alarmed at the appearance of blood. On expressing my incredulity, said she could not be mistaken, had examined it attentively, said it was dingy and red. I could not verify her statement by the examination of a specimen, as it did not reappear under the diminished dose of the decoction, which I thought it prudent to continue. Her recovery was rapid and complete, and continues up to time of writing (January 10th, 1859) in good health.

In conclusion, I may state that I do not bring this article before the profession with any other intent than that of having its virtues more thoroughly tested by some of my professional brethren, whose opportunities for the treatment of this affection are peculiarly great, and should their experience confirm or disapprove my limited observations, I trust that they will bring them before the profession with such prominence as may be commensurate with its claims.

EDITORIAL.

Death of Samuel S. Whitney.—As the profession generally are familiar with the facts in this case through the public prints, we shall abstain from any farther notice of it.

Award of Prizes in Bellevue Hospital.—A meeting of the Board of Examiners for awarding the Wood & Elliott Prizes, was held at Bellevue Hospital on Monday 28th of February. Present, Profs. Mott, Parker, Post, Barker, Childs, and Watts. Dr. Mott, *President*, Dr. Childs, *Secretary*.

For the Wood Prizes there were four competitors. First prize awarded to No. 2, Mariano C. De Socarraz, Univ. Medical College. Second prize to No. 4, George Bromley, New York Medical College.

The Elliot Prize, two specimens presented. The prize was awarded to E. A. Hervey, Univ. Medical College.

A New Work.—We take pleasure in announcing that Drs. Noeggerrath and Jacobi have inpress a work which will soon appear, embracing a complete review of the literature of the diseases of women and children, for the year 1858, in the manner of their contributions to the retrospect department of this journal.

Medical Periodicals.—*The New York Medical Press* is the title of a weekly periodical journal, which began its existence in this city on the 1st of January. It is edited by Drs. Kiernan and O'Meagher with ability, and fills an important place in our periodical literature.

The Semi-Monthly News has made its appearance in Louisville, Ky.

PUBLICATIONS RECEIVED.

Beale (Lionel). The Microscope in its Application to Practical Medicine. London: John Churchill, 1858.

Thompson (Henry). The Pathology and Treatment of Stricture of the Urethra and Urinary Fistulæ. Second Edition. London: John Churchill, 1858.

Green (Horace). A Treatise on Diseases of the Air Passages, etc. Fourth Edition. New York: Wiley & Halsted, 1858.

Malgaigne (J. F.) A Treatise on Fractures. Translated from the French by John H. Packard, M.D. Philadelphia: J. B. Lippincott & Co., 1859.

Dalton (J. C.) A Treatise on Human Physiology, designed for the use of Students. Philadelphia: Blanchard & Lea, 1859.

Bakewell (R. H.) A Popular Manual of Female Diseases. London: Richard Kimpton, 1859.

Condie (Francis D.) A Practical Treatise on the Diseases of Children. Fifth Edition, revised and enlarged. Philadelphia: Blanchard & Lea, 1858.

Hunter (John). A Treatise on the Venereal Disease. With copious additions, by Dr. Philip Ricord, Surgeon to the Hôpital du Midi, Paris, etc. Translated and edited, with notes, by Freeman J. Bumstead, M.D., Lecturer on Venereal at the Coll. Phys. and Surg. N. Y. Second Edition, revised, containing a résumé of Ricord's recent Lectures on Chancre. Philadelphia: Blanchard & Lea, 1859.

Braithwaite's Retrospect of Practical Medicine and Surgery. July–Dec. 1858. London: Simpkin & Co.

Rankin's Abstract of the Medical Sciences. July–December, 1858. London: John Churchill, and Philadelphia: Lindsay & Blakiston.

Pamphlets.—Quarterly Report of the City Physician of Boston, Jan. 1859.—Typhus Fever in Great Britain, by J. B. Upham, M.D. Boston, 1858.—Diphtheritis in California, by Q. J. Fourgeaud, M.D. Sacramento, 1858. Registration Reports of South Carolina, by Dr. R. W. Gibbs, for 1853, '56, '57, and of Kentucky, by Dr. W. L. Sutton, for 1854, '55, '56.—Historical and Biographical Address, delivered before the Cortland Co. Medical Society, by Dr. G. W. Bradford. Homer, 1859.

Reports.—On Moral Insanity, by Dr. W. M. Reese of N. Y.—On Umbilical Hemorrhage in the Newly Born, by Dr. J. F. Jenkins, of N. Y.—On the Functions of the Cerebellum, by Dr. E. Andrews, of Chicago, Ill.—On the Nervous System in Febrile Diseases, by Dr. Henry Fraser Campbell, of Ga.—On the Treatment best adapted to each variety of Cataract, by Dr. M. Stephenson, of N. Y.

CONTENTS.—NO. III.

PART I.—ORIGINAL COMMUNICATIONS.

PAGE

ART. I.—History of the Compressed Sponge as a Remedial Agent for the Treatment of Strictures of the Rectum, Urethra, etc., also of Morbid Growths and other Affections. By J. P. BATCHELDER, M.D., ... 301

ART. II.—Four Cases of Injection of a Caustic Solution into the Cavity of the Womb, illustrative of the Advantages and Dangers connected with this Proceeding. By E. NOEGGERATH, M.D., . 331

ART. III.—The Sanitary and Dietetic Laws of the Hebrews, as related to Medicine: A paper read before the N. Y. Medical Union, Feb. 24, 1859. By MARK BLUMENTHAL, M.D., . . 339

ART. IV.—Report of the New York Eye Infirmary, for January and February, 1859. By F. J. BUMSTEAD, M.D., . . . 358

ART. V.—Remarks on the Treatment of Fractures of the Thigh, with a new Apparatus. With report of Cases. By J. H. HOBART BURGE, M.D., ... 365

ART. VI.—Clinical Lecture on Ununited Fractures, delivered at the New York Hospital, on 23d November, 1858. By THOMAS M. MARKOE, M.D., ... 371

ART. VII.—Report of the Proceedings of the Medical Societies and of the Practice of the Hospitals in New York; prepared for the NEW YORK JOURNAL OF MEDICINE, by GEORGE F. SHRADY, M.D., ... 385

PART II.—CRITICAL ANALYSIS.

ART. VIII.—Medico-Chirurgical Transactions. Published by the Royal Medical and Chirurgical Society of London, . . 398

ART. IX.—A Course of Lectures on Obstetrics. By WM. TYLER SMITH, M.D. Edited and Annotated by AUGUSTUS K. GARDNER, A.M., M.D., ... 402

ART. X.—Practical Midwifery, comprising an account of 13,478 deliveries which occurred in the Dublin Lying-in Hospital. By E. B. SINCLAIR, A.B., T.C.D., and GEORGE JOHNSTON, M.D., . 403

Forty-third Annual Report of the Lying-in Hospital of the Royal Medico-chirurg. Academy at Dresden. By DR. GREUSER, . 403

PAGE
Report of the Obstetrical and Gynæcological Clinic of Jena, for 1855, 1856, 1857. By Ed. Martin, M.D., ... 403
Annual Report of the Obstetric Clinic for Midwives in Vienna, for 1857. By Dr. Habit, ... 404
Report of the Obstetrical Clinic of Prof. Scanzoni at Wurzburg, from Nov. 1, 1853 to Octob. 31, 1856. By J. B. Schmidt, M.D., 404

BIBLIOGRAPHICAL NOTICES.

Art. XI.—A Treatise on Fractures. By J. F. Malgaigne, . 408
Art. XII.—Ventilation in American Dwellings, with a series of Diagrams, presenting examples in the different classes of habitations. By David Boswell Reid, M.D., F.R.S.E., etc., etc., . 408
Art. XIII.—A Treatise on the Venereal Disease. By John Hunter, F.R.S., with copious additions, by Dr. Philip Ricord, 409
Art. XIV.—A Practical Treatise on the Causes, Symptoms and Treatment of Spermatorrhœa. By M. Lallemand, . . 409
Art. XV.—A Treatise on Venereal Diseases. By A. Vidal (de Cassis), ... 410
Art. XVI.—The Uræmic Convulsions of Pregnancy, Parturition and Childbed. By Dr. Carl R. Braun, ... 410
Art. XVII.—A popular Manual of Female Diseases; their causes, symptoms, prevention and cure; including the diseases of pregnancy and childbirth. By Robert H. Bakewell, M.D., . 410

PART III.—MEDICAL RETROSPECT.

Diphtherite, ... 411

CORRESPONDENCE.

Death and almost entire absorption of a fœtus of six months' development, ... 418
Uræmic convulsions following scarlatina, ... 420
Inhalation of oxygen as a remedy in obstructed respiration, . . 422

EDITORIAL.

Re-interment of the remains of John Hunter, ... 424
St. Luke's Hospital, ... 425
Officers of the New York Sanitary Association, . . . 425
Quarantine and Sanitary Convention, ... 426
New York Preparatory School of Medicine, ... 426
Publications Received, ... 425

THE NEW YORK
JOURNAL OF MEDICINE

FOR MAY, 1859.

PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*History of the Compressed Sponge as a remedial Agent for the Treatment of Strictures of the Rectum, Urethra, etc., also of Morbid Growths and other Affections.* By J. P. BATCHELDER, M.D., late President of the New York Academy of Medicine.

MR. EDITOR: In the following articles it is proposed to lay before the readers of your Journal the results chiefly of my personal experience in regard to the use of the compressed Sponge in the treatment of various diseases.

Prior to its employment in this way the sponge had been used merely as a styptic, for the stanching of blood. For this purpose it was first recommended by Celsus, who directed that "after the wound had been filled with dry lint, a sponge dipped in cold water be applied over the lint and pressed upon the part with the hand." This, I believe is the first announcement of the true principle (compression) upon which the permanent suppression of hemorrhage depends; and also the first mention of the sponge as a remedial agent in the hand of surgery.

From the time of Celsus to the publication of "Bloomfield's Surgery," in 1763, I have not been able to find it alluded to by any writer.*

Bloomfield, after speaking of agaric for stopping hemorrhage alludes to the sponge, for the same purpose; and subsequently refers to it as having been recommended by his friend Mr. Charles White of Manchester, who, he says, has "made use of it with success in restraining blood in amputations when the largest arteries have been divided;" but he himself does not appear to place much reliance on it when "an artery of any considerable size is wounded." "Some people," he tells us, "have said that the sponge will not do more than dry lint; he would try it when he could not get at the vessel, to surround it with a ligature. The larger the artery, the less likely is the sponge to succeed, especially when the vessel is so situated that a tourniquet cannot be applied to stop the hemorrhage, till the sponge can gain attachment." The foregoing remarks by Celsus and White, relate to the common sponge, employed in the usual way; but the observations which we are about to submit, refer to it as prepared and used in a certain manner, for particular purposes; but in this essay we propose to speak of the article as simply flattened, or moulded into the form of a tent by compression, and used for the attainment of special objects.

---

* Since writing the above, I have discovered that I was mistaken, as will be noticed in another place.

Pieces of fine soft live sponge should be selected and freed from all extraneous substances, as sand, shells, fragments of stone, etc., washed and thoroughly dried,* and subjected to pressure.

For this purpose, I am in the habit of employing the common copying letter press; but a much less expensive apparatus, as a piece of board with a weight, or even a large stone, may be resorted to and will effect the object very well, especially when a fresh application is to be made daily; in which case the sponge should go directly from the press to the diseased part.† When the surgeon desires to have the compressed sponge at all times ready for any and every emergency, he will do well to keep it weeks or even months, subject to the compressing power—otherwise it will again expand in consequence of the facility with which it absorbs moisture from the atmosphere.

THE TENT.

Method of preparing.—The other modification of the compressed sponge which we propose to consider, is that of the tent. Those prepared in the old way, with wax, we have not used for many years (indeed scarcely ever); but those which we have been in the habit of using have been prepared in one of two ways. 1. By winding a piece of clean, fine sponge well moistened with water, with a thread or small cord and letting it remain till thoroughly dry, when it will be fit for use on the removal of the thread. 2. By saturating a piece of sponge with a solution of gum arabic, weak or strong, according to the particular use which is to be made of the tent, and then winding it with a small cord, as fine pack-thread, which is to be removed when dry, and the tent made smooth with a sharp knife, and adapted in size and shape to the use which is to be made of it. It should always be prepared with the mucilage when designed for dilating the canal of the cervix uteri; or to be used in any other part where moisture might occasion premature expansion, *i. e.*, before it can be properly inserted; also when it is desirable to avoid rapid dilatation, which sometimes causes considerable pain or uneasiness. When the tent can be introduced with facility, the mucilage should be dispensed with. To facilitate the winding, the piece of sponge should be transfixed with an awl, which must be removed as soon as the winding is finished. When the tent is to be used for dilating the canal of the cervix uteri, or a stricture of the rectum, or in any other internal part from which it is to be withdrawn, it will be expedient, before winding, to carry a needle armed with a strong thread through the centre of the piece, from base to apex, and back. These free portions of the thread twisted together will form a cord sufficiently strong for retraction.

---

* This is essential, for if the sponge be not made quite dry, the compression will be incomplete.

† In such instances, placing the sponge beneath a piece of board upon which the post of a mahogany bedstead rests, will answer.

We now proceed to consider the several uses to which the compressed sponge, in one form or another, may be applied for the cure of disease—especially the removal of morbid growths. With the efficacy of pressure in removing the various structures of the body—even the most dense and solid of which it is composed, as bones, cartilages, etc., all are familiarly acquainted. The surgeon often resorts to pressure, and is not unfrequently foiled in accomplishing his object for want of an appropriate medium through which the application can be made in a manner which will be tolerated by the part to which it is applied. The removal of even solid parts by the pressure of tumors, as in the case of aneurisms, suggested to the writer the idea of employing the sponge, particularly if its efficiency were increased, as it probably might be if compressed by the firm application of a bandage and subsequently imbued with water. After some little experience the thought occurred to me that if the sponge were compressed previous to being bound upon the part, and afterward saturated with water, its expansive power would be greatly increased, while at the same time it would become so softened that its influence would be very analogous to that of the tumors alluded to. The conception formed, the trial was not long delayed, by which the correctness of the theory was established, beyond a doubt. This method was first adopted and carried out in the treatment of enlargements of the female mammæ, and was soon after extended to that of mammary abscesses—particularly if chronic or subacute.

Having been so well and truly described in Art. VI. of the *N. Y. Journal of Medicine*, published September, 1857, particularly in the "report of fourteen cases of mammary abscess treated with the compressed sponge (Dr. Foster's method), by John G. Johnson, M.D., house surgeon to Bellevue Hospital;"* and by the report of cases published by Dr. S. Conant Foster, late physician to the Bellevue Hospital, and by Dr. W. C. Roberts, both of this city, I shall omit the detail of my own practice in many cases.

His (Dr. Johnson's) method of preparing and applying the sponge is identical with that which I had repeatedly described at the Bellevue Hospital several years prior to his connection therewith. As I cannot do better, I shall transcribe the description published by him in the number of the *N. Y. Journal of Medicine*, before mentioned.

"Method of Treatment.—The softest pieces of sponge should be selected, each piece being large enough to cover the entire breast. The sponge should be carefully washed to remove any gravel, shells, etc., it may contain; and when thoroughly dried it is to be compressed for a long time under a heavy weight, or between the lips of an ordinary carpenter's vice. The sponge, when thoroughly pressed, should be bound as firmly to the breast as the patient will allow, by means of a bandage passing several times around the body above and below the other breast, a piece of lint being placed between the breast and the sponge [I often omit this interposition], to prevent the latter from irritating. It is then to be soaked with cold water, and the bandage preventing the sponge from expanding outward, its expansion makes the desired pressure upon the breast.† The patient usually complains of pain for ten or fifteen minutes after the application. The temperature of the water-dressing is soon raised to that of the body, and thus we have the essential elements of a poultice—heat and moisture—without the inconvenience of an ordinary poultice. This soft, yet firm compression adapts itself evenly and equally to the whole breast; the sponges are to be kept wet during the whole time of their application. The patient soon becomes accustomed to them, and the alleviation of the suffering is so great as to cause her to request the continuance of the treatment. The sponges should be renewed daily."

---

* Dr. Johnson, in his report of the "fourteen cases," omitted to give the writer credit for the introduction of the remedy (compressed sponge), which he employed in those cases with such signal success. Of the fact that the practice had originated with the writer, Dr. Johnson was undoubtedly not aware; for he tells us that "the following plan of treatment was directed by Dr. Stephen Smith, visiting surgeon to the hospital in a case (case 1) of mammary abscess which had long been under treatment in the surgical division, but which had thus far remained intractable."

† When it can be borne, the pressure may be increased or even intensified by adding a few turns of a roller made of the india-rubber cloth. This mode of bandaging will be again adverted to when we come to treat of the scirrous breast.—B.

In addition to the treatment of this class of affections, so ably and justly described by Drs. Foster and Johnson, I will take the liberty to refer the reader to a letter from my friend Dr. W. C. Roberts, on the several and various uses of the compressed sponge, published in the November number of the *N. Y. Journal of Medicine*, for 1857. My own experience of its utility, in most, if not all cases analogous to those related by him, accords well with his.

OF THE USES TO WHICH THE COMPRESSED SPONGE, IN THE TENT FORM, MAY BE APPLIED.

1. *Dilatation of the canal of the cervix uteri, in cases of sterility; difficult menstruation, and for the relief of other affections of the part or organ.*—Prepared as directed with the mucilage of gum arabic, the tent, guided by the finger, may be introduced by the help of a pair of long-bladed forceps, or by being fixed upon the end of a small, round, and slightly curved stilet, about 12 inches long, whose end on which the tent is fixed should be reduced to a point—with a shoulder about five-eighths of an inch from the extremity. The portion between the point and the shoulder should be small enough to be received into the base of the tent and long enough to keep it steady when being introduced; while the shoulder enables the operator to push it home without injuring, or in any way whatever endangering the part. Upon this pointed portion, the tent may be fixed preparatory to its introduction, which is sometimes difficult, or at first impossible on account of the smallness of the cervical canal. In such cases we commence the dilating process by introducing fine metallic dilators, successively, and increased in size, until a small tent can be passed,* which must be followed, day after day, by others, large as can be introduced, until the dilatation is accomplished, which in some cases a few

---

* These dilators should be about one inch and a quarter long, and have a thread a foot and a half long attached to them, by which they may be fastened to the clothes of the patient, to prevent their being dropped or lost. Although there is seldom any danger that the tent, like the dilator, will escape, it may be well in some instances, perhaps in all, to secure it in much the same way.

days only, and in others, weeks will be required to effect. When the tent is introduced by the aid of the stilet as described, its dislodgment from the stilet and lodgment in the canal of the cervix uteri may be effected by pressing upon its base with the point of the finger which guides it to its place of destination, and will keep it there while the stilet is being withdrawn. Occasionally it is quite convenient, and even necessary, to have recourse to the speculum:—when the long-bladed forceps will be essential to the introduction of the tent, which should not be allowed to remain longer than twenty or twenty-four hours at the longest, on account of the temperature of the part rendering the retained secretions irritating and offensive. On the removal of a tent, the vagina should be thoroughly syringed with cold or tepid water—also, it will be well to do the same just before a tent is introduced. Between these operations it may be expedient in some cases to let a day or two intervene; but it is best to avoid this as it delays the cure. If it be the design of the practitioner to induce premature labor, the tents should be continuously applied; or when a tent is fully expanded, it should be removed and another of larger dimensions introduced.*

2. *Dilatation of sinuses.*—These may be dilated to any desirable extent, by means of the sponge tent; and most of them, sooner or later, healed by simply promoting the free discharge of matter—the want of which being the principal cause of their not healing. As this process of dilatation is going on, the tent, from day to day, should be lengthened as well as enlarged. The action of the sponge has a favorable influence in changing the texture of the part lining the fistula, which, in cases of long standing, is supposed to take on the nature of a mucous membrane.

3. *Fistula in ano.*—Many cases of this affection may be cured by the use of the sponge tent, without an operation; which is not always free from danger, and therefore to be

---

* In cases of pregnancy attended with hemorrhage, we sometimes find on examination, the *os* partly open, but inflamed, or indurated and unyielding—not dilating so as to allow the embryo, placenta and membranes to pass in cases of abortion. There may indeed be slight parturient pains, but not sufficiently strong to force the contents of the uterus through the refractory cervix. What shall be done? We answer: Insert a sponge tent large enough to fill the canal—which will not only constitute the very best possible tampon, but dilate the passage, bring on or increase the uterine pains, and cause the contents of the uterus to be expelled; or, if this result should not follow—it will have so far dilated the canal as to allow the practitioner to pass an appropriate instrument (either long-bladed forceps, or a properly constructed small lever), by which the ovum, or placenta and membranes, may be effectually and safely removed. The introduction of the sponge tent, we repeat, not only stops the flooding, but induces labor pains, and also prepares the outlet for the passage of the uterine contents.

avoided when a safer method promises to be successful. An abscess not unfrequently forms in the neighborhood of the anus, the discharge from which is not always mingled with fecal matter. Before an opening into the intestine occurs, the septum between it and the cavity of the abscess, becomes very thin—a mere membrane; still no communication between them is to be found, and none, as Mr. Syme justly observes, occurs while the external orifice remains freely open; but when it becomes so nearly closed as to prevent the ready discharge of the matter—which will not only continue to burrow in various directions in the cellular substance about the rectum and also along the perineum, but by the occasional or constant pressure of fecal matter within, and pus without, on this septum—it ulcerates or is absorbed, and we have what surgeons term a complete *fistula in ano.* Now, if soon after the bursting or opening of the abscess, a sponge tent be fairly and fully inserted, it will not only absorb the matter, and prevent its burrowing or pressing upon the septum, but secure it a free and ready exit, by keeping the external orifice patent. By this treatment an opening into the gut is prevented, and the sore heals from the bottom like an abscess in any other part. That the communication between the abscess and the intestine does sometimes exist prior to the external opening, is true, as every practical surgeon well knows, but in many cases (a majority according to my experience) the external opening takes place first; and that flatus and fecal matter are not discharged from it for some time, or not until it has begun to close—when nature, to relieve herself, perforates the septum. Had the sponge tent been used at first, the perforation would not have happened—the external opening would have been kept free, and the abscess have healed without further trouble.

This use of the sponge tent is peculiarly appropriate, when a fistulous passage leads to a diseased bone. In the course of a week or fortnight, I have in such cases dilated the sinus, so as to be able to place my thumb and three or four fingers directly upon the diseased bone, and remove the sequestrum, if one existed; or, if there was caries, to remove the diseased portion of bone by the repeated application of the compressed sponge.

Now, caries is an ulceration of the bone, which in some respects resembles cancer of the soft parts. In this disease the relative proportions between earthy and animal matter entering into the composition of the bone seem to be disturbed. In some cases the animal matter, or vascular portion, exceeds the earthy, and then we may have decaying bone with fungous bleeding masses. In others the earthy matter may predominate, and produce irritation, or cause exfoliation. Nature's method of cure, particularly in the last instance, is to get rid of the earthy matter, either by solution and absorption, or by wholly depriving it of its vitality, when we have exfoliation or necrosis. The reason why caries is so tedious and difficult of cure, is, that the earthy matter, partially or wholly deprived of vitality, keeps up a constant irritation, which prevents a portion in the immediate vicinity from being duly nourished. Nature, as suggested, causes the death of the diseased morbid portions, and then throws them off. The surgeon for the same purpose applies the actual cautery, as recommended by Boyer; or the gouge and chisel; but the action of the sponge is less dangerous, painful, or repulsive, and more certain.

In 1822, I discovered this action of the compressed sponge upon diseased bone by accident.

Visiting a patient at a distance from my home, I was asked by a gentleman to see a poor boy about ten or twelve years old who had been affected with a fever sore, as cases of necrosis were usually termed at that time in New England. The disease was located in the lower third of the femur, near the knee. Diseased bone was felt at the bottom of the sinus. As I had not with me suitable instruments for an operation, I directed and showed the parents how to prepare and use the sponge tent; saying that I should be again in that neighborhood in the course of ten days or a fortnight, and would then perform the appropriate operation; until then they might use the tent as directed. They followed the direction to the letter; but as fortune would have it, I did not happen that way, during the three or four succeeding weeks, when I found an opening about an inch and three quarters in its longest diameter, and one inch in its shortest leading directly down to the bone, the exposed surface of which wore a red, healthy, granulating appearance. Instead of an operation, the sponge was directed to be laid aside, and dry lint substituted, with which the sore was to be daily dressed until healed, which occurred in a few weeks. Since that time I have continued to treat caries of the bones in this way, and have seldom been disappointed in the result. It is but just, however, to say that some few cases have resisted this mode of treatment. Notwithstanding, it has been with me the established rule of practice.*

In November, 1853, I was called to visit a little girl about four years old, who had a small tumor on the inside of the left tibia, just below the tubercle, which appeared some months before. Its precise nature was not apparent. It had been attended with very little pain or uneasiness, and was not tender to the touch. Various discutients had been tried without success. It contained a fluid which was discharged through a tolerably free opening, made with a bistoury. The probe detected a sinus which extended downward from the centre of the collection about an inch, or a little more. Various attempts to heal the sinus were made, which proved fruitless; at length the probe detected a small extent of denuded bone. The precise nature of the case was not, however made out. It was at first suspected that the external affection of the bone might communicate with some deeper seated mischief, as an abscess within the medullary cavity; but no passage leading to such abscess could be found; and as the progress of the disease had been so slow, and attended with so little pain, that idea was given up, and dilatation of the sinus with the sponge tent was determined on, and the process immediately commenced. The child was very unmanageable, but the attempt was completely successful. The sinus was dilated so as to admit the end of the finger, and soon the whole diseased surface of the bone was exposed, to which a fresh piece of compressed sponge was applied every morning, and confined there by means of a compress and bandage. In a short time this diseased surface of the bone assumed a red, healthy, granulating appearance, when it was deemed advisable by Dr. Mott, who visited the little patient in consultation with me, to lay aside the sponge, and allow the wound to heal, as there was much reason to suppose it would do in a short time; but in this we were disappointed, and an injection of the muriatic acid, properly diluted, was employed. This course was pursued for some time without any apparent benefit—the naked bone over which the sinus had nearly closed, could still be felt with the probe. The tent and compressed sponge were again put in requisition, and as soon as the sore at the bottom reassumed a healthy, granulating appearance, the sponge was omitted, and the ulcer soon began to heal, and finally closed, and had remained well up to the time (two years after) when I last examined the limb, and judging from the indented appearance of the cicatrix, and its firm connection with the bone beneath, there is no reason to question or doubt the permanency of the cure. As this child was evidently tainted with a hereditary strumous diathesis, we were greatly alarmed during the healing of this sore, particularly towards the latter part of it, at a commencing enlargement of the femur, occupying the whole of its lower third. There were no signs of inflammation—no tenderness—no pain or uneasiness; indeed, the child ran about and played, as if nothing was the matter. Her health otherwise appeared quite good. The mother, who at first seemed rather averse to the application of the compressed sponge, now, becoming alarmed, consented, and a few pieces were applied which covered each condyle, and extended up the limb co-extensively with the swelling. Fresh pieces were bound on with a tight bandage, every morning before she left her bed,[*] and made thoroughly wet, and kept so during the day, and as much of the night as was convenient. In less than a fortnight, a diminution of the swelling was apparent, and in six weeks from the first application the limb was reduced to the same size as the other, although when the treatment commenced it was more than a third larger, by actual admeasurement, than its congener. The dressing was now laid aside, and both the tibia and femur have remained sound and well. This child, as has been stated, is of an highly scrofulous diathesis, and has been, since the cure above-mentioned, several times affected with strumous ophthalmia and ulcers of the cornea, with repeated abscesses and discharges from the ears, but was when last seen, about two years ago, enjoying tolerably robust health.[†] Several other cases of enlarged femur, successfully treated in this way, might be adduced, but we hope what has been said will be sufficient to induce gentlemen to give it a trial in similar affections—particularly in syphilitic nodes. We have seen it disperse one on the upper and lateral part of the os frontis, half as large as a hen's egg, in a fortnight, and one a full half-inch thick, which extended like a splint some five or six inches along the tibia, by the same application—the compressed sponge and roller, in less than a month. It is true that in these cases the hydriodate of potash and cor. sublimate were taken internally at the same time.[‡] We have not, in fact, seen a single failure.

---

* I have seen cases of necrosis of long standing, in which the sequestrum had by its irritation induced caries of the newly formed bone which continued after the removal of the sequestrum by an operation; and in one instance the patient lost his leg from this cause. When I have removed the sequestrum and found the new bone diseased, I have invariably succeeded in effecting a complete cure by the use of the compressed sponge—commencing it immediately after the operation.

---

[*] It is hardly necessary to say that the limb, from the toes to the knee, was likewise firmly bandaged.

[†] These affections of the eye and ear were always on the same side of the body as were the limbs affected. I have not very unfrequently noticed this fact, which I do not recollect to have seen mentioned in any of our books.

[‡] Of late I have combined the muriate of ammonia with the hydriodate of potash, which, it has seemed to me, nearly doubles its efficacy. The following is the formula I am most in the habit of prescribing:

℞ Hydriodate of Potash,
Muriate of Ammonia, aa. ʒ ij.
Cor. Sublimate, grs. 2, (more or less, according to the circumstances of the case,
Syr. Tolu, Syr. Ginger, aa. ℥ ij, mix.

Dose—A teaspoonful an hour and a half after each meal. This has certainly been, in my hands, a most effectual remedy for all the tertiary, and, indeed, most

4. *Dilatation of the meatus auditorius.*—The sponge tent may be applied as suggested by Dr. Roberts for the dilatation of the meatus auditorius, when contracted by extraneously deposited matter—the occasional result of ulceration. For the treatment of these cases, the tent, or even a small piece of very soft compressed sponge, will answer, which not only absorbs the matter and dilates the passage, but to a certain degree produces a favorable change in the diseased parts with which it comes in contact. It should be introduced gently and deeply—in fact, to the bottom of the meatus. It may, in some cases, be convenient to have it transfixed with a thread to facilitate its removal.

5. *Nasal cavities and bones.*—In ulcerations and disease of the nasal cavities and bones, it may be occasionally used with advantage. It should be introduced into one nostril only at a time; here considerable tact is required in its management.

6. *Dilatation of strictures.*—For dilating strictures of the rectum, the sponge tent is certainly well adapted and may be used with great effect. I shall allude to two cases only, by way of illustration. A gentleman, somewhat advanced in life, had been for years troubled with constipation of the bowels. On examination I found a stricture in the rectum at the usual place, within reach of the finger, so tight as merely to admit its tip. The stools accorded with this state of the gut. The sponge tent, prepared with mucilage and transfixed as described was introduced daily; each larger than the preceding. On account of the parts becoming irritable, a day or two was now and then allowed to intervene. In about three weeks the stricture was so far removed, either by dilatation or absorption—probably both—that masses of fæcal matter almost as large as a hen's egg passed with, comparatively speaking, but little difficulty, except what was occasioned by the irritable state of the sphincter ani which is very apt to exist in such cases. The other case was that of a lady, which was treated much in the same way and very effectually relieved. That she was permanently cured I am not able to say, having lost sight of her for several years past. In the case of the elderly gentleman, death, as I was informed, was the final result—the disease proving malignant.* It was so deemed when it first came under

---

of the secondary symptoms of syphilis—also for the removal of the pains which savor much of rheumatism, but frequently resemble those caused by the venereal virus. The cor. sublimate may be wholly left out, or its dose so modified as to meet each case.

* Stricture of the rectum, when connected with malignant disease, furnishes an important diagnostic symptom by which to distinguish scirrhus and medullary cancer from the epithelial, in which there is no stricture, or actual contraction of

my observation; and was so considered by Professor Willard Parker, who saw the patient several times in consultation with me. I did not see the termination of the case, the patient having, by the advice of a certain non-professional gentleman, passed into the hands of a quack. The tent I commonly use in these cases is prepared without the mucilage, but when there is much irritability it dilates too rapidly, and had better, under such circumstances, be prepared with the mucilage. In some cases I have found the parts too irritable to tolerate the tent, unless its introduction was preceded by a suppository composed of the watery extract of opium.*

7. *Hemorrhoidal tumors, or bleeding piles.*—The sponge tent introduced just within the external sphincter ani may be successfully resorted to for the compression of hemorrhoidal tumors, and also for the suppression of hemorrhages from the rectum. It should be transfixed by the thread as directed, for its retraction or withdrawal, if deemed expedient.

8. *Stricture of the urethra.*—The sponge tent may be used for the cure of stricture in the urethra. In such cases, a full-sized metallic sound or bougie should be first carried down to the stricture and pressed firmly against it for a longer or shorter time according to the degree of uneasiness it occasions, when it should be withdrawn, and a tube, open at both ends, containing the tent and a piston, introduced, which may be carried down to, or against the stricture. When the tent has been carried home and pressed some time against or into the stricture, and in fact entirely forced out of the tube, the piston may be withdrawn and a few drops of water passed through the tube down to the tent which is kept steadily in its place within the stricture, or firmly pressed against it. In a short time the tube also may be withdrawn, and the tent having expanded so as to retain its place, allowed to remain. As it should be invariably transfixed with a thread as described, its withdrawal is entirely at the discretion of the surgeon, or patient. To guard against all contingencies, a button or a piece of sponge too large for admission into the meatus urinarius externus should be attached to the other end of the thread. This precaution may be the more proper, when the stricture is situated far up or near the bladder in the membraneous portion

---

the gut, although there may be and often is a softened tumor trenching upon the cavity of the intestine, and sometimes even protruding through the anus. Until this happens, or until the sphincter is interfered with, defecation seems to be but little affected in this last mentioned affection—epithelial cancer.

*** ℞ Watery ext. of opium, 2 grs.; ext. hyosciamus, 1 gr.; ext. belladonna, ½ gr.; mix, make into a suppository, to be introduced into the rectum an hour or two previous to the tent.**

of the urethra. Some may consider this unnecessary, but it can do no harm; and as it is known that this canal is endowed with a kind of suction as well as an expulsive power, by which bodies have sometimes been carried backward into the bladder when they have been lodged only a little distance within the external meatus, it is a proper precaution.*

The surgeon need be in no hurry to remove the tent; even though it block up the urethra, never mind—the expulsatory power of the bladder in attempts to micturate will help to dilate the stricture. Let the patient get rid of the tent in this way if he can; if not, let him withdraw it. If the stricture of the urethra itself be, as it sometimes is, very irritable, a few drops of the saturated solution of the extract of belladonna and watery extract of opium, may be passed down to the stricture half an hour before the introduction of the tent. For obvious reasons the patient should micturate a short time previous to the passage of the tent, or solution. This part of our subject relative to strictures of urethra will be more particularly considered at another time.

9. *Dilatation of the female urethra.*—Women are rarely seriously troubled with urinary calculi, and are, therefore, less liable to be subjected to the treatment necessary for their removal, to which the other sex is obliged to submit. In them, the urethra is not only short but very dilatable, so much so that in those who have borne children, the finger well oiled may be carried directly up into the bladder, without any previous preparation, or much accompanying pain or subsequent uneasiness. After this experiment forceps may be introduced, and the stone, which in the female bladder is almost always soft, be crushed, and the fragments removed or allowed to escape.

But in case it is deemed advisable to dilate the urethra, the sponge tent is admirably adapted to the purpose. It may be prepared with or without the mucilage, as shall best accord with the exigencies of the case. We shall leave this part of our subject to the ingenuity and tact of the general practitioner. It has been objected to the sponge tent that incontinence of urine is apt to follow its use—when it does so, it seldom lasts more than a week or ten days.

---

* I have known several instances of the kind. An elderly man foolishly passed a white bean into his urethra and allowed it to remain, thinking that it would necessarily be forced out at his next micturation. When his attention was next turned to it, the bean could not be felt; he, therefore, concluded that it had escaped. It was not long, however, before he began to experience symptoms of stone in the bladder. In about a year I performed the operation of lithotomy and removed a phosphatic calculus from his bladder which had a white bean for a nucleus. The patient recovered and it is presumed never repeated the experiment.

10. *Morbid growths.*—It is a fact with which surgeons are quite familiar, that morbid growths are less able than primitive structures to resist agencies that disturb their repose without causing undue excitement. With regard to such as tend to malignity we should be careful to avoid exciting much irritation, and endeavor to act on them through adjacent parts which, though less apt to resent the interference of the surgeon, will, nevertheless, not tolerate the presence of anything useless or annoying beyond a certain degree.

If the annoyance be such, however, as to interfere with their comfort, or disturb their normal action, the absorbents in the immediate vicinity forthwith set about removing the offending cause; hence it is that moderate, but firm and steady pressure, or the mere displacement of a tumor, or morbid growth, from its original seat to another location in which it is regarded as an intruder by the parts incommoded by its presence, is frequently all that is required for its entire removal. Besides, this pressure, or rather compression, acts in other ways in the removal of tumors and tumefactions. It prevents the influx and promotes the efflux of fluids, produces a change in the density and other properties of both solids and fluids, interrupts nutrition, favors exosmosis and renders the exosmosed matter effete and more liable to be absorbed;* for it is a law of the system which requires that whatever has become useless or effete shall be eliminated, or at least that the effort to effect its removal shall be made. To accomplish these objects, pressure has been more frequently resorted to by members of the profession than any other agency, with, however, but moderate success, owing probably to the fact that the best method of applying it had not been adopted. Observing and reflecting upon the effects produced by the pressure of aneurismal and other tumors, on contiguous parts, my attention was particularly directed to the subject with the hope of finding an artificial substitute by which pressure analogous to that by the afore-mentioned agents might be made sufficiently powerful for the removal of morbid growths which are, as suggested, less likely than parts in health to resist such pressure if persistently and judiciously applied. Well aware of the various expedients to which recourse has been had, and of their failure or only partial success, the thought occurred to me whether considerable pressure might not be made upon even a sensitive part by means of a soft sponge bound more or less firmly upon it, and that its effect would be increased by soaking it, bandage and all, with water. Experience soon established the principle, the plan and its adaptedness. Although the result appeared certain, still the progress was slow; it therefore seemed to be a desideratum to devise some means by which the efficiency of the sponge might be increased, when the recollection of the beneficial effects of the compressed sponge in the cure of caries and other affections of the bones suggested that it might be the very desideratum sought, a suggestion which we trust has been fully verified and elevated into a principle by ample experience.

---

* A German author, Professor Lehman, I believe, tells us that "absorption is nothing but a function of the mechanical condition."

Our attention in connection with the removal of morbid growths by the compressed sponge, will be mostly devoted to malignant tumors, particularly cancerous, involving in a great measure the principles and treatment also proper to those which are not malignant.

The pressure occasioned by the expansion of the compressed sponge disturbs the cancer cells, and forces them out of place; affects their consistency, and causes them to be dissolved, and the tumor, thus freed of its malignant ingredients, may be more readily removed by absorption, if the process be continued, or, if not absolutely removed, it may be so divested of its malignity as to remain harmless for years, as happened in a case which will be related. Does this pressure, as the doctrine teaches, deprive the cancer cells of their power to contaminate other parts, or the system in general? The cancer cell, like the pus globule, is dissolved, and being thus changed in its nature, is more readily absorbed, and, of course, enters the general circulation not as a malignant, but innocuous substance; and instead of contaminating the system, is eliminated therefrom as are other disintegrations of tissues and structures, without harming any part. Cancerous affections, locally considered, seem to derive their nutriment from surrounding parts by a sort of imbibition or endosmosis, and not from any direct vascular medium. The sponge, by its peculiar mode of pressure on the diseased part, either destroys its texture or prevents its being nourished, and continues to do so until its agency is fully resisted by the circumjacent parts, which are in a healthy condition.* When this is accomplished; the sponge may be dispensed with. This remedy may, and undoubtedly will, fail when either the constitution or the surrounding parts are, to any considerable degree or extent, affected. The cancerous diathesis, even when somewhat apparent, does not, however, seem to preclude its use, as will be seen by the following case.

---

* In this respect its effects seem to be somewhat analogous to the action of certain caustics—particularly arsenic, as mentioned by Dr. Rush.

Case 1.—Mrs. L., a young widow, about 30 years of age, of a pale, leucophlegmatic temperament, by the advice of a medical friend, called to consult me on account of a scirrhous tumor in one of her breasts, which had been for some time a source of considerable uneasiness to herself and friends. This I endeavored to calm, and assured her that the tumor would probably be removed by the means which would be recommended, if systematically and perseveringly followed. She immediately placed herself under my care, and the compressed sponge was applied, and bound firmly upon the tumor, and then completely saturated with water. This last process, (wetting the sponge) however simple it may have appeared, was, as usual, attended with considerable difficulty—much more than would have been anticipated by those not familiar with the process. Fresh pieces of compressed sponge were bound on day after day, and this course was pursued for some five or six weeks, perhaps a little longer, when it was difficult to find the least vestige of the tumor proper, but there remained a slight density of structure, which was probably the result of the firm continuous pressure to which the parts had been subjected. She was dismissed with the advice to continue the treatment a week or two longer, and then lay it aside; she was also requested to inform me immediately of any symptoms of return, since which I have heard nothing from her. The inference then is that she has remained well.*

Case 2.—In June, 1851, Mrs. Y., a married lady, consulted me concerning a diseased mamma. On examination I found a scirrhous tumor as large as a hen's egg, in the right breast, below the nipple, and another half as large, under the outer edge of the pectoralis major muscle, about midway between that first mentioned and the axilla. Both were of a woody hardness. Neither had been much painful, or only so at times. They had been diagnosed as scirrhous by several surgeons, who had advised their removal by an operation to which she was unwilling to submit without further advice. Her constitution being apparently good, and scarcely if at all affected with the cancerous cachexia, she was encouraged to expect a favorable result from the use of the compressed sponge, which was immediately applied as in other cases, and bound on, at first with a common bandage, and saturated with water. After a few days, when the inconvenience of the tight bandage had in a measure subsided, one of india-rubber cloth was superadded, which, owing to its elasticity, greatly increased the efficacy of the sponge.*

---

* On the 16th of July last, I had the pleasure of seeing this lady, and of ascertaining from herself that a perfect cure had been effected, and that her health, which very soon began to improve, was now perfect. I believe no medicine was administered, or, if any, only a few blue pills to correct the digestive functions.

As this rubber bandage was impervious to water, some difficulty was experienced in wetting and keeping the sponge fully saturated, which was, however, satisfactorily accomplished by raising the edge of the rubber bandage, and spending considerable time, and taking much care that the water reached the sponge in sufficient quantity to cause its full expansion. About the first of October following, the tumor nearest the axilla had entirely disappeared, and the other had very much diminished, and gave the patient no further uneasiness. Soon after this she ceased to visit me, and I heard nothing more of her, except that she had left the city.†

Soon after the occurrence of the first case, another of a different description, and involving an additional principle, came under my observation, and was subjected to a similar mode of treatment. A medical gentleman who had heard something of the result of the former case, requested me to see a lady affected with malignant disease in the upper part of the left breast. There was a tumor as large or larger than the fist, situated about midway between the nipple and the axilla. In the centre and the most prominent part of this tumor, was an opening as large as a sixpence, from which extended inward, and rather upward, a kind of fistulous passage, which would scarcely admit the end of the little finger. The extent of this sinus in the direction mentioned, was about three inches. It discharged daily a large quantity of thin sanious matter. The patient was pale, emaciated, and very feeble. The cancerous cachexia was unmistakably present. The case was manifestly hopeless. As it would do no harm, and might possibly do some good, I advised the Dr. to pass a sponge tent into the fistula its full length, and have it enlarged every day, so as to fill the passage. This was done to test the efficacy of the sponge in causing the destruction of morbid parts or diseased structures rather than from any expectation of its curative agency, the disease having progressed too far, and produced such a deleterious change in her system. This course of treatment was followed by surprising results. When I saw the patient again, in about a fortnight, very considerable progress had been made in the removal of the local disease. The cavity formed by the sponge occupied more than half the tumor, and the lady's health was much improved.*

---

* I have forgotten whether this kind of bandage was used in Case 1.

† On the first of July last (1858), she called to consult me on account of another difficulty, for which she had just visited the city. On examining the breast, I found below the nipple a tumor firm and hard, about the size of a small almond, which she said was a remnant of the tumor for which the sponge had formerly been applied. The treatment, she informed me, was continued for some time after her last interview with me, but with less energy, and was finally laid aside on account of her being pregnant. She, however, went through her gestation, accouchment and nursing, without any trouble from the tumor, which has ever since remained quiet in its present condition.

About ten days after this, I saw her again in company with Prof. Van Buren, and the attending physician. The sponges had been faithfully applied, and increased in number and size, so that they now occupied and filled a cavity nearly commensurate with the tumor, while the lady's general health had surprisingly improved. Her night-sweats had ceased—she could now walk about—sit up almost the whole day, and eat, with a relish, a fair allowance of food at each meal. The doctor was advised to pursue the same course of treatment, which he did for a short time only; but with the same results. His attendance being, as I was informed, discontinued in consequence of a disagreement between him and the patient, or some of her friends. Of the final result I have no knowledge—although it is presumed to have been unfortunate, yet whatever it may have been, the case showed beyond question the efficacy of the compressed sponge in the removal of morbid structures. The favorable effect on the general health of this patient, was attributed to the absorption of the secreted matter by the sponge, which was thus prevented from being again received into the system. I was not at this time aware that the sponge had ever been used for this purpose; but on recently looking over some of the old works which I find in my library, I discovered that it is mentioned in the 2d volume of the Medical Observations, published in 1762, that a Mr. Thomas Kirkland, Surgeon at Ashby de la Zouch, in a letter to Dr. Hunter, read May 5, 1760 (see Mr. Kirkland's letter, page 278), before a society of physicians, on amputations, alludes to this topic, and speaks of the use of the sponge in high terms. As his method of using it differs materially from mine, I shall quote his own language. "As no method, that I know of, has hitherto been discovered, to prevent this return of matter into the blood, I am induced by repeated experience, to recommend, as soon as digestion is complete, the application of pieces of fine sponge (the wound being first covered with thin layers of dry lint), which answer this purpose by imbibing the thinnest part of the matter from the lint, while that which remains becomes too thick to be absorbed." Mr. Kirkland's observations are so much to the point, and so important, that the entire letter above referred to will be found in the appendix.

---

* This effect of the sponge has been observed in other cases, and will be again adverted to.

When it can be borne, whether compressed or not, I am satisfied that the sponge is an excellent application to cancerous and certain other ulcers of a vitiated character. The secretions of such ulcers, when taken up and carried into the general circulation, seriously affect the health, and may, and indeed often do, as I have had frequent opportunities of seeing, break down the constitution, and ultimately destroy life, all of which deleterious consequences, the sponge, by absorbing the secreted fluid, tends to prevent. In the removal of the elevated, indurated edges of the callous ulcer, it is exceedingly useful. It is a much more pleasant way of getting rid of these surroundings which prevent the healing of the sore, than by shaving them off with a knife, or destroying them by applying the nitric acid or caustic. The sponge should be large enough to overleap the edges of the ulcer, at least half an inch.

On a visit to the Bellevue Hospital, some years since, my attention was called to a case of cancer in the breast, by my friend Dr. S. Conant Foster. The history of the case in brief, was: that the breast had been amputated by Dr. Mott, senior, for cancer; and the disease having returned, had made considerable progress towards ulceration. At my suggestion, the compressed sponge was applied, and its use assiduously and judiciously followed up by the zealous young house physician, whose name I regret to have forgotten, seconded by the skillful advice of Dr. Foster. Some weeks after, I was again asked to see this patient, and had the satisfaction of finding that the affection had almost entirely disappeared, and was subsequently informed that she soon left the institution, with a mere remnant of the disease.

For further particulars concerning this case, I beg leave to refer to the following letter from Dr. Foster:

24 EAST 21st STREET, N. Y., May 14, 1855.

DEAR SIR: The cases of cancerous disease treated by me in Bellevue Hospital some years since by means of the compressed sponge were three in number. The attempt was made in one or two other cases, but circumstances prevented its being continued long enough to have any result. Not having notes of these cases, I am obliged to trust to memory for the facts, but in their essential features, the histories are so clear in my recollection that they may be relied on.

Case 1.—This patient, a woman about 48 years of age, entered the hospital with a scirrhous deposit in the left mamma, or rather where the mamma had been, of the size of a hen's egg. She had been operated on for a similar tumor, 2 years before, by Dr. Mott, and the disease was now returning about the cicatrix. Her general appearance was not decidedly bad, but there was a somewhat sallow hue of the skin. The sponge was applied steadily for three or four weeks, at the end of which time, the induration had almost wholly disappeared, leaving the skin and subjacent tissues in a perfectly soft and healthy condition. She left the hospital soon after my term of service closed, at which time the tumor was not bigger than a filbert.

Some months after, she reëntered the hospital, the disease having returned, and was operated on by Dr. Van Buren. Again, within a year from the last operation, she was again in the hospital under my care. The cicatrix, and parts in the neighborhood, were again the seat of a malignant deposit, the surface of which was red and angry in appearance, very hard and nodulated. The axillary glands were now decidedly involved; I believe that one or more of them had been removed at the last operation. At any rate the induration was continuous, from the lowest affected point on the thorax, obliquely up to the axilla. Ulceration had also commenced near the lower end of the cicatrix, and had reached perhaps an inch in diameter. She was now suffering a great deal of pain, both at the seat of disease, and in the limbs, and had lost flesh and appetite. She was anxious for the application of the sponge, and it was carefully applied, first dressing the ulcer with simple ointment. Its effect was very soon perceptible. Her pains were diminished, while the tumor perceptibly decreased, and the ulceration was reduced to the size of a three cent piece or less. The redness of the surface also lost its intensity.

During the three or four weeks that the sponge was applied at this time (and it was not done very regularly, owing to the full state of the wards, and the consequently arduous duties of the house physician,) she had a cough, which led to the suspicion of a cancerous deposit in the lungs. She had also, if my memory serves me, a severe eczema of the legs, and once I think an attack of erysipelas. To these affections was at length superadded dysentery, which passed into a chronic state, and finally terminated her life. Her death occurring some weeks after my term of attendance was completed, I did not witness the autopsy. The important point, however, in this connection, was to determine whether any cancerous deposits existed in the internal organs. I am informed that this was not the case, and that the death was apparently attributable to the intestinal disorder.

Case 2.—This was a woman somewhat younger than the last patient. When she entered, she had a scirrhous tumor of the breast nearly or quite as large as in the first case. The sponge was faithfully applied for some weeks. It occasioned pain at first, so that she could only bear it for an hour or two. Soon, however, she bore it longer, and the result was a rapid diminution in the size of the tumor. Before the complete disappearance of it, however, the patient left the hospital, and I have not since heard of her.

Case 3.—This was a case in which the cancerous deposit was diffused over a large surface, extending up toward the clavicle, and to the integuments of the side, below the axilla. The application of the sponge could not be as efficiently made as in the other cases on this account. Nevertheless, wherever the pressure was applied, it did not fail to be followed by absorption of the indurated tissues. The termination of this case I do not know.

The impression left on my mind by these cases was very strongly in favor of the treatment adopted. In no instance could any unpleasant effect be perceived as a consequence of the pressure, and in every instance the absorption of the heterologous deposit was rapid and marked.

It was suggested by several of my colleages that this plan of treatment was likely to occasion deposits in the liver or lungs. Whether such deposits are more liable to occur under this than under any other plan, can only be determined by time and experience. That secondary deposits are not a *necessary* consequence of absorption of the original disease seems to be almost settled by the first of these cases. It seems to me that there is great reason for hoping that some means will one day be discovered whereby these, and all other morbid products, having been once taken up by the absorbents, may be eliminated from the system entirely. I am. dear sir,

With great respect,
Your ob't servant,
S. Conant Foster.

J. P. Bachelder. M.D.

Case 4. Malignant disease of the jaw.—A lad about 8 or 10 years old, from New Jersey, was brought by his mother to Dr. Mott's clinique, in 1847 or '48, with a fungous tumor protruding from the lower jaw, situated in the space formerly occupied by the first and second molar teeth on the left side.

This morbid growth had made its appearance some months before, loosening the teeth—protruding on each side of them, and pushing away or involving the gums, previous to his coming to the clinique. The teeth had been extracted, and the tumor, with, I believe, a portion of the alveolar process, removed by a surgeon in the boy's immediate vicinity, which operation was now repeated by Dr. Mott. In a few weeks the little fellow was brought again to the clinique—the disease having returned. Unable to lay my hand on the notes of the case, I have indeed forgotten, as well as Dr. Mott himself, whether another operation was performed. Whether it was, or was not, is quite immaterial to our purpose. The disease had returned: and at my suggestion, the compressed sponge was to be tried; and he was assigned by Dr. Mott to my care and management. I took him with his mother, to my office, and cut out two or three pieces of thoroughly compressed sponge sufficiently large to cover the whole tumor, and indeed extend beyond it on the outer and inner sides of the alveolar process and rising higher than the upper surfaces of the adjacent teeth before and behind it; and then bound the lower maxilla firmly to the upper by means of a roller, leaving the pieces of sponge to expand by the imbibition of saliva. The mother was supplied with several pieces of compressed sponge, and directed to apply them in the same manner once or twice a day. She was told by Dr. Mott that the disease was of a malignant character, and would be very likely to destroy her son—certainly, if not properly and faithfully attended to. The doctor's faith in a favorable result was obviously not very strong; nor was anybody's else, except my own. Notwithstanding, in the course of five or six weeks, the mother and lad again appeared at Dr. Mott's clinique, not to ask advice, but to show the result—that the boy was perfectly cured. The remedy had been entirely successful. The location of the disease was favorable to the application and action of the sponge. The result of this case was analogous to what I had witnessed in others: one only, however, will be related.

Mrs. ——, a lady between 50 and 60 years of age, residing in the town of Litchfield, Herkimer Co., N. Y., affected with a similar disease, applied to me, some eighteen or twenty years ago. The diseased mass, situated in the lower jaw on the left side, with the alveolar process connected with it, was entirely removed by an operation. Knowing the nature of the affection, clean work was made of it—notwithstanding, it returned, and I contemplated another removal by sawing through the entire jaw, before and behind the diseased part, where it appeared sound, and removing the intervening portion from which sprang the tumor. Having learned from experience, as well as from considerable observation, the inutility of attempting to remove malignant disease of a bone by operation, without removing the entire bone, I abandoned this project, for the present, at least, and resolved to try the compressed sponge, without having at that time much faith in its ability to cure a disease which had resisted what appeared to have been a thorough application of the knife; but by what I had seen of the effects of the compressed sponge in caries, and some other affections of the bones, I was, however, induced to make the trial, and although the patient was considerably advanced in life, the cure was as perfect as in the case of the boy.

11. *Cancer of the penis with enlarged glands in both groins.*—P. N——, a patient in the New York Hospital, had malignant disease of the glans and prepuce of some eight or ten month's standing. The inguinal glands were also considerably enlarged, so much so that the propriety of an operation was seriously mooted by the surgeons of the hospital. The suggestion of the writer that the diseased glands might be removed by the use of the compressed sponge, had, perhaps, some

influence in its favor. The amputation was performed by Dr. Hoffman, August 31, 1846, as appears by the hospital books, and in a day or two the sponges were applied to the tumors in the groins, which very soon began to diminish; and when I last saw the man, a short time previous to his leaving the institution, the tumors in one groin had entirely disappeared, while a mere remnant was perceptible in the other.* The right groin was occupied not by a single tumor, but by several, forming a mass or congeries of enlarged glands.

Remarks.—Soon after the operation, his general health began to improve, and ere long the cancerous diathesis, which was somewhat apparent on his admission, entirely disappeared. He left apparently well, and has not been heard from since.

Although I have had but little experience in the treatment of cheloid tumors which are so apt to return after removal, I am inclined to the opinion that the compressed sponge will be found quite as apt to succeed, and, indeed, more so than any other method of treatment which has hitherto been adopted.

12. *Swelled Testicle.*—At first it might seem difficult to make the application to this organ, but with suitable attention and skill on the part of him who applies the sponge and bandage, and care on the part of the patient, the difficulty vanishes. The testicle should be turned up on the abdomen, and upon it the sponge and spica bandaged, so modified and applied as to suit the exigencies of each particular case. At first it may be proper to apply the sponge uncompressed for a day or two, and when the patient and part have become somewhat accustomed to the application, the sponge more or less firmly compressed, and more or less firmly bound on, may be substituted. The patient must be confined to the bed, and the bandages readjusted whenever the testicle slips from the place of its confinement, which it is very apt to do, unless considerable care on the part of the patient is exercised.†

13. *Vegetations*, when situated on the glans penis or prepuce, may also be speedily removed in the same way—by turning the organ up over the pubes—with the sponge and bandage, applied as in the preceding case. To prevent the removal of the

---

* Hospital Record.—"Sept. 8, the glands perceptibly diminished October 6, the enlarged gland in the left groin has entirely disappeared—that in the right is much diminished under iodine and pressure."

† The removal of the enlarged testicle, also that of enlarged glands in the groin, is much promoted by the occasional administration of an emetic. Emesis may be advantageously connected with the compressed sponge, particularly in the discussion of buboes and also in diseases of the joints. As there is a disposition to sleep after the operation of an emetic, it is a rule of practice with me, in all cases which admit of delay, to have it administered in the latter part of the evening, in order to secure the patient a good night's rest.

dressing when the patient urinates, a flexible catheter may be introduced. The surgeon will often be surprised at the rapidity with which these growths are destroyed by this method of treatment, and with so little pain or uneasiness. The greatest inconvenience seems to be that of lying in bed; to this, however, the patient had better submit than suffer the pain of cauterization, or the application of the knife.

14. *Tumors not malignant.*—A man about 35 years of age, a patient in the N. Y. Hospital, of a sandy complexion and scrofulous habit, was admitted mainly on account of a soft, quaggy tumor at the angle of the jaw, about as large as a small orange. To this the compressed sponge was judiciously, skillfully, and effectually applied by Dr. Washburn, the house surgeon, by which the entire diseased mass was removed in a short time. I have not the particulars of the case, but I believe he took iodine in some form or other at the same time, and probably had it applied to the part affected, conjointly with the sponge. Many cases could be detailed in which enlarged lymphatic glands in this situation, and also in other parts of the body, have been speedily removed. I have been well—indeed, better satisfied with this than with any other method of treating tumefied glands in the groin connected with chancres. During the last fifteen years I have had but two cases of suppurating bubo. In one the swelling had been of too long standing to be discussed, and in the other the suppuration was owing to the carelessness, or rather folly of the young man, who would continue to walk about instead of remaining in bed as directed. In both these cases the hardness and swelling which remained after the discharge of the matter, were successfully and speedily dissipated by the application of the compressed sponge and recumbent posture.* In some of these cases of enlarged inguinal glands I have used in addition to the bandage the hernial truss, with a stiff spring, and the glass pad which was once in vogue. The pressure made by this instrument in addition to the bandage can be easily graduated by putting pads of cloth between the spring and the body on one side or the other of the tumor.

15. *Enlarged joints.*—Whether from an effusion of fluid into the cavity as the sequel of synovitis, or of an effusion of some kind

---

* When a gland or a circumscribed tumor is pretty certain to suppurate, it is not even then necessary, or in many cases proper, to lay aside the compressed sponge. Make an opening in the piece of sponge to be applied, which will correspond in size and situation with the focus of the maturing abscess, and apply it with whatever firmness the patient will bear, and cause it to be kept wet with warm instead of cold water. In this way the sponge will act as a poultice as well as by compression.

into the cellular tissues surrounding the joint, the compressed sponge is the remedy which has succeeded better in my hands than any other. In the second variety its success has been more prompt and uniform than in the first. In both, the sponge is to be considered an important means superadded to those in ordinary or common use.

16. *Of compressed sponge as a styptic, or an application for stopping the flow of blood.*—While we admit that the ligature is the only remedy upon which the scientific surgeon should absolutely rely for the suppression of hemorrhage, especially that which comes from a wounded artery, still it will be admitted by every surgeon of much experience that cases do occur in which he is glad to have recourse to other means even when the flow of blood proceeds from arteries of considerable size. Wounds of the palmar and plantar arteries not unfrequently give the surgeon a good deal of trouble, and it is, therefore, well to know that they may be always controlled by this agent, particularly if aided by position. The phenomena attending these wounds are often somewhat peculiar. The blood, forced extensively into the surrounding cellular substance—perhaps under the aponeurosis, seems to come welling out from a considerable surface, which renders it quite difficult to find the wounded vessel. If this surface be scraped again and again with the handle of a scalpel, the extent from which the blood issues will be lessened down to a small space. Upon this let a piece of compressed sponge, shaved to a point, be applied, and perhaps another still broader, followed by a compress and bandage, and the wounded part brought to an acute angle with the limb above, to which it may be bandaged, or confined as closely as is consistent with the comfort of the patient; the uneasiness occasioned by this procedure may be relieved by extending the limb only a very little, from time to time, just to give temporary relief, which may be done as often as required without a recurrence of the hemorrhage. Although it is undoubtedly a fact that this position of the limb alone will in most cases control the hemorrhage,* in order to be sure I employ the sponge as recommended.

---

* With the influence of this arrangement of parts upon the arterial circulation of the hand and wrist I became accidentally acquainted many years ago, by failing to feel the pulse, or feeling it very unsatisfactorily when the arm was much flexed at the elbow. On further examination the same result, though less decisive, was found to follow the flexure of the leg on the thigh, and still more, that of the latter on the trunk. In some, these positions will render the pulse at the wrist, and also the beat of the anterior and posterior tibials, very weak or quite imperceptible at the points where their pulsations are most readily felt—*i. e.*, immediately before or behind the lower end of the tibia—a fact of too much impor-

PACHYDERMATOCELE.

This is a name given by Dr. Mott to an affection which involves the integument and subtegumentary areolar tissues immediately beneath the part affected. It is a rare disease—not described in any of our elementary books, to my knowledge, certainly. I do recollect having seen but three cases. In two of these, the affection occupied the side of the face and head, to which it seemed to be confined. In the third, that of a woman, it was much more extensive. In all these cases, an operation for the removal of the hypertrophied mass (which was congenital and seemed to be somewhat analogous to the nævus), was instituted and performed by Dr. Mott. In the first, that of a young man named Rich, whom most of the members of the New York profession have probably seen; the disease returned, and Dr. Mott repeated the operation; again the disease returned. Both operations appeared to have some, but no very decided effect in retarding the growth. Of the final result of the third case I have not been informed. In the second, the disease returned, and assumed very much the same appearance as it did before the operation. It was at this conjuncture that the treatment by the compressed sponge commenced. In order to make the principle of displacement as well as that of compression available, the hypertrophied mass, which hung in folds on the side of the face, was turned up as much as possible—even put considerably on the stretch and kept in that condition by binding upon it pieces of compressed sponge. These were adapted to the part as far as practicable, and bound firmly on with a bandage of old sleazy cloth and the whole thoroughly wet. To do this effectually was attended with considerable difficulty, which was overcome chiefly by the assiduity and perseverance of the female relatives of the patient. In this they were greatly encouraged by the favorable change which was in a short time quite perceptible. Although fresh sponges which covered the whole pachydermatous mass were applied every morning, the improvement was not equally alike favorable in all parts of the diseased mass. That portion which occupied the orbit and closed the eye on the affected side did not yield as readily as other parts which could be more effect-

---

tance not to be made available in practice, especially in the treatment of wounded arteries in the hand or foot. It remains to suggest the trial of position in the treatment of popliteal aneurism. The object in such cases being the coagulation of the blood in the tumor, might not this be effected by bending the thigh upon the pelvis and confining it in that position for several days, lessening its irksomeness by the administration of opium, or occasionally ether or chloroform, or by slightly altering the position of the limb—extending it a little for a short time—not enough, however, to renew the circulation?

ually acted on by being placed between the sponge and bones of the face, and cranium. Even when the mass elsewhere had been removed, the portion about the eye had only considerably diminished. In order to act more directly upon it, small pieces of sponge nicely fitted were applied next the lids and surmounted by larger pieces. This plan succeeded well—the eye bore the pressure, although considerably increased from day to day, with much less complaining than was expected.* In about six weeks or two months the whole mass was absorbed except a small portion about the eye, which incommoded him so little that he resumed his business, that of a peddler, during the day, and applying the sponge and bandage only during the night. Thinking himself cured, or so nearly well that the small portion of diseased structure which remained would go away without further trouble, he ceased to call on me and soon left off the treatment. In this calculation he was miserably disappointed, for in a few months the disease seemed to spread from the eye and extend in every direction. Ashamed of having neglected to persevere in the treatment, as had been enjoined upon him to do, so long as any vestige of the disease remained, he was for some time deterred from calling on me. When he did, I was exceedingly chagrined to find that the disease had not only returned, but had been allowed to progress until it had got to be as extensive into one third as it was when the sponge was first applied. In one respect it was fortunate, for it gave another opportunity for testing the efficiency of this mode of treatment. The sponges which were again applied in right good earnest, caused a more rapid absorption than at first. The disease was now wholly removed—in how long a time I am not able to state with precision, on account of my notes of the case having been either mislaid or lost, which compels me to state it from memory. Some months after the treatment had ceased, I saw him, and examined the part, originally the seat of the disease, and came to the conclusion that the cure was complete. From that time to this I have heard nothing of him. He was charged to call on me without delay, in case any manifestation of return should occur. The legitimate conclusion and inference is that the cure is lasting.

---

* In some affections of the eye, as staphyloma, enlargements of the ball, and particularly in granulated lids, the sponge compressed or uncompressed. bound with a proper degree of firmness, answers a very good purpose. Any medicated lotion may be used instead of water. In cases of granulated lids it does not interfere with the use of nitrate of silver or caustic.

VARICOSE VEINS.

I have recently used the compressed sponge in a case of varicose veins of the inferior extremities of a patient who has long been affected with this complaint, and whose distress has been great when obliged to be much on her feet. The disease seems to have been a family complaint; owing probably to a constitutional weakness of the coats of the veins which allowed them to dilate so as to prevent their valves from effectually sustaining the supra column of blood; the consequence was that these vessels below the knee became varicose. For the purpose of sustaining this superimposed pressure, particularly when the patient was in an erect posture, a compress was applied on the internal saphena vein where it passes behind the condyle of the femur—an expedient often productive of much comfort. In this case, however, a piece of compressed sponge was substituted for the compress, and a vulcanized india-rubber bandage for one of cloth. The sponge, when thoroughly wet, very effectually compressed the vein, while the bandage, applied so as to make little or no pressure on any other vessels, was borne with slight inconvenience. This simple appliance relieved all the symptoms and enabled her to walk out as much as she pleased, without the inconvenience or suffering incident to such exercise. The bandage and sponge were removed at night and replaced in the morning.

Copy of a Letter from Mr. Thomas Kirkland, Surgeon, at Ashby de la Zouch. Communicated to Dr. Hunter. Taken from the second volume of Medical Observations and Inquiries. By a Society of Physicians in London. Read before said Society, May 5, 1760.

It is well known to practitioners in surgery, that the greatest danger attending the cure of those who have undergone an amputation of the larger extremities, is owing to an absorption of matter from the wound after inflammation is gone off, and the vessels are become pervious. Indeed, when the patient is healthy and strong, and the matter absorbed is mild and good, it passes off in the urine, without doing much mischief; but in scorbutic constitutions, or where the habit is become bad by deferring the operation too long, or from any other cause, the matter absorbed being acrid, irregular feverish paroxysms, with loss of appetite, sooner or later, according to the degree of acrimony, come on; and the patient is often carried off, either by a colliquative fever, or a profuse hemorrhage from the whole surface of the wound, notwithstanding the most efficacious remedies have been used.

As no method, that I know of, has hitherto been discovered, to prevent this return of matter into the blood, I am induced by repeated experience, to recommend, as soon as digestion is complete, the application of pieces of fine sponge (the wound being covered with thin layers of dry lint), which answers this purpose by imbibing the thinnest part of the matter from the lint, while that which remains becomes too thick to be absorbed.

By this means the new flesh is kept moist, without being too much relaxed, which happens when it is constantly soaked in thin matter; and the discharge from the wound is less than would otherwise happen, the fibres being preserved in a state capable of making a proper resistance to the impulse of the circulating fluids; a circumstance of great importance, where the patient is become very weak before the operation is performed. Nor will the practice of removing the dressings twice a day, or laying them on loose, that the matter may run off the wound, answer the same end; for the lint that is usually applied collects, and always retains, a quantity of matter against the ends of the fibres, which, being thin, is constantly absorbed. Besides, removing the dressings often is not only troublesome to the patient, but frequently in the country impracticable, on account of the distance of the surgeon; and, when they are laid on loosely, the new flesh becomes luxuriant, and the cure is retarded for want of a proper degree of pressure.

The stump must first be surrounded with long pledgets, whose edges coming lower than the wound should be closed down after the sponge is applied, which must be wet, and dried again with a cloth, immediately before it is used, otherwise it might be uneasy upon the part: being cut into small slices, it lies much closer than when large; and it should be kept pressed against the lint with a bandage, or it will not have its proper effect.

The number of pieces may be gradually decreased, as the wound lessens; and the quantity of very fetid matter, which is pressed from the sponge, will determine how long its use is necessary. To illustrate what is here advanced, I shall relate the following case, which first put me upon pursuing this practice.

Thomas Mee, nineteen years of age, having a white swelling of the knee, the acrid matter, contained in the joint after several years, made its way out; and, upon passing a probe through the aperture, the head of the *tibia*, *fibula*, and lower end of the *os femoris* were found carious.

He was in exquisite pain, attended with a fever, looseness, and colliquative sweats; his appetite was quite gone, he was become extremely weak, and had been without sleep for some time.

Under these circumstances amputation seemed the only means left for his relief; and, thinking it better to try a doubtful remedy than none, I took off his leg above the affected part, on the 14th day of March, 1757.

From the time of the operation, all his bad symptoms declined, and in four days entirely disappeared, the wound, at the same time, having the most promising aspect; but, soon after the inflammation was gone off, and digestion complete, his looseness returned, he lost his appetite, and was again seized with a hectic fever. In a few days the wound began to be pale, flabby, and unnaturally sensitive; and a gleet was discharged instead of good matter. On examining his stools, a great quantity of purulent matter was found in them; but a much larger quantity was contained in his urine, which had acquired its natural color after the symptomatic fever went off.

A bolster of tow was laid loosely next the lint, that the matter might run off, and the wound was dressed twice a day; but this had not the desired effect, for reasons before assigned. His urine and stools were still purulent; but upon the wound altering for the worse, recourse was had to the bark; but this medicine could not, with the usual additions in such cases, be kept from running off by the intestines; for which reason it was disused.

I then thought of the sponge and applied it in the manner described, laying over it bolsters of tow which were confined with long strips of sticking plaster, and a woollen cap.

Next morning, upon taking off the dressings, I found the sponge quite full of thin fetid *serum*, and a thick unctuous matter only remained upon the side of the lint towards the flesh.

By such dressing his urine, in two days, became free from matter, his looseness and fever gradually declined, and went wholly off; the discharge lessened, his appetite returned, and in less than a fortnight the wound had regained a good appearance. The sponge was one day omitted, and next morning there was a good deal of matter again in his urine, and he had two loose stools in the night; but the sponge being reapplied, a stop was put to these symptoms, and with the assistance of proper bandages, etc., the patient was cured. I have since used sponge with the same success in several amputations, and in other large wounds where the urine and stools were loaded with matter. Nor when it was applied as soon as the inflammation was gone off, has the cure ever been interrupted with any of those symptoms which usually follow the absorption of matter, though some patients were of extreme bad habits, and very weak.

But I have never, since the first case, laid it aside to see whether an alteration would follow for the worse, being thoroughly convinced of its good effects, and unwilling to make any experiments that might tend to the disadvantage of the patient.

Nevertheless, it cannot be of the same use in contused or lacerated wounds till the dead parts are separated, being hindered by the necessary dressings; nor is it much wanted in this case, notwithstanding extravasated blood, bruised flesh, putrifying, produce a most active poison, for the applications generally used both forward the separation, correct the putrid matter, and hinder its being absorbed, by giving it liberty to get out of the wound, provided it be sufficiently large; but when the new flesh begins to rise, and digestive balsams and other emollients become improper, it may be used with advantage.

Perhaps the use of the sponge may not appear so beneficial in hospital as in private practice, as the putrid *effluvia* arising from different kinds of sores, mortification, etc., being carried through the lungs and *vasa inhalantia* into the blood, produces nearly the same symptoms as arise from matter absorbed from the wound. However it is in this case not less useful, as it will prevent both causes acting jointly.

I would not have it understood in recommending the application of the sponge, that I thought medicines in this case always unnecessary. On the contrary, when matter is got into the blood before the sponge is applied, and nature is remiss in expelling it by the kidneys, the antisceptic diuretics and the bark may be given with great advantage. But I am persuaded if sponge is used in due time, this assistance will not be necessary, unless required on account of the patient's being brought into a bad state of health previous to the operation.

Art II.—*Four Cases of Injection of a Caustic Solution into the Cavity of the Womb, illustrative of the Advantages and Dangers connected with this Proceeding.* By E. Noeggerath, M.D. *

Case 1.—*Intractable hemorrhage—Injection of iodine—Cure.*—Mrs. B——, of New York, a well formed woman, of dark complexion, somewhat emaciated and pale, has been suffering from uterine hemorrhage for the last twelve months. She was married six years ago, and had one child, a boy five years old. Two years ago, her husband died, and left her in charge of an establishment for prostitutes. She became pregnant, and not wishing to bear the child to the full term, she applied to an irregular physician of Brooklyn, with a view of having an abortion performed. This was effected, by means of introducing a pointed instrument into her womb, and in a few days after the operation, the contents of the uterus were discharged. From this time, she flowed freely for about two weeks, when hemorrage ceased gradually for about ten or twelve days. It returned regularly every fourth week, and lasted for about a fortnight. The blood she lost was dark and clotted, and its discharge was increased when the patient moved about. Latterly the hemorrhage was so violent, that she applied for medical attendance, and notwithstanding she had tried several skillful physicians, one after another, not the least impression was made upon the quantity of blood lost. Finally, I was called in (June, 1858), and found her suffering very much from repeated loss of blood, and unable to attend to her business. First, I applied such internal remedies as I thought proper under the circumstances, recommending at once absolute rest in the recumbent position. Alum, tannin, ergot, iron, oxide of silver were administered in large doses, and although every one of these remedies was allowed to have a fair trial, the hemorrhage was only arrested for a short time. External applications were added, cold fomentations, astringent injections, but with no better result. In this way, I attended her for about three months, without making any actual progress towards a radical cure. All that could be ascertained by an examination of the parts, was a slight hypertrophy of the whole organ, and the very easy passage of the uterine probe, as high as the fundus. The latter circumstance, combined with the complete absence of pain, served to induce me to try an intra-uterine injection. With regard to the cause of the bleeding, I was of opinion that there existed small polypoid growths in the cavity of the womb, as remnants from an imcompletely detached serotina at the time of abortion, or a hypertrophical swelling of the mucous membrane in general, owing to imperfect involution after the act of violence alluded to. In both instances, an intra-uterine injection was not only justified, but demanded. An intra-uterine syringe, with long pipe, made of hard-rubber, and of about ℥ss capacity, was filled with tinctura iodini, and the slender mouthpiece introduced through a speculum into the cavity of the womb, until it touched the fundus uteri. By slowly advancing the piston, I emptied the contents into the uterus, which were immediately expelled beneath the syringe, and thrown back into the speculum by violent contractions of the womb. This first injection was made at the tme when the last hemorrhage had nearly subsided, so that I had before me about twelve days till the next menstrual period. Besides a sensation of fullness about the bowels, nothing was perceived by the patient during or after the injection. She immediately afterwards got up and walked about the house. The reaction being so very trifling, I asked the patient to call at my office every other day, to have the injection repeated. This was regularly done, and after every injection, the patient rode and walked down from Twenty-sixth street to Centre, near Broome street, without experiencing the least inconvenience. The iodine was thus employed four times before the next menses made their appearance, and when they came on, a complete change in their character could be remarked. The blood was fluid instead of clotted, considerably brighter color than before, and lasting for five days, not more copious than is usual in a woman menstruating normally. When the period was over, I repeated the injection twice a week, in order to confirm the results already obtained. The next period was all that could be desired, and I discharged her as cured. She afterwards left for the country, but from occasional reports of her condition, I am aware that she has had no recurrence of hemorrhage.

---

* This article will appear in full in our forthcoming work, *Contributions to Midwifery*, etc.

Case 2.—Uterine hemorrhage of twenty-three years standing, cured by a single injection of diluted liquor ferri sesquichlorati —Alarming symptoms after the injection—Slow recovery.— Mrs. G——d, of East Seventeenth street, forty-five years of age, of German parentage, menstruated early in life, and her courses continued regular up to the year 1835, when she was married, and nine months after, delivered of a healthy child. The confinement was as natural as could be desired, so that she was about the house before nine days had elapsed. Although she did not nurse her baby, her courses did not appear until twelve months after delivery, brought on, as it seems, by the use of emmenagogue remedies, and then lasted for half a year without intermission. Medical advice was sought, and everything was tried to bring on a more natural periodical discharge. But treatment seemed to have very little influence, the flux ceasing only ten or twelve days, to return with unchecked violence. This condition lasted for sixteen or eighteen years, when the menorrhagic attacks began to increase. For the last five or six years, she had very often only a few days of intermission, and this space was filled by an even more troublesome acrid watery discharge. At the beginning of 1857, new complaints were added, viz., a burning pain in the ovarian region, and a sharp pain at the time when she had sexual intercourse, which act was always followed by a discharge of blood from the genitals. She therefore dragged out a most miserable existence, being all the time wet with blood or other discharges; constantly in pain, weak, nervous, and emaciated, without the hope of relief, and altogether a burden to herself and family. Under these circumstances, I was called upon to see her, and give my advice. I found a person whose aspect was pitiful to witness, of an ashy complexion, a mere skeleton, scarcely able to move, and even fatigued by a short conversation, but resolved to submit to anything that might effect a change in her condition, be it at the risk of her life. When I saw her, I was moved with a strong desire to give her all the relief that might be afforded by medical science and art, but my hopes with regard to a radical cure were very faint, not so much from the reduced state of the patient's health, as from the fact that she had been for the last few years attended, without deriving much benefit, by Dr. S., a physician for whose ability and learning I entertain the highest admiration. A digital examination being necessary, was readily consented to. The vaginal portion of the uterus rested somewhat lower than it ought to be under normal circumstances, was considerably thicker, but soft, the os tincæ patulous, and covered with small granulations. By the double touch, the entire organ appeared to be enlarged, and of a more spherical form than usual, painful even upon gentle pressure; left ovary considerably enlarged, and very painful. By examining through the rectum, a pretty large section of the posterior surface of the womb could be circumscribed, and in this way it was ascertained that a hard, flat tumor, of considerable size, was imbedded in the uterine tissue. The probe passed easily into the cavity, and could be advanced three inches, thus giving a hypertrophy of one inch in length. The results thus obtained, together with the patient's account of her ailings, induced me to assume that I had to deal with a fibrous growth in the uterine tissue, or a simple uterine polypus, protruding into its cavity. In order to make sure of the diagnosis, and as a preparatory step for treatment, I proceeded to enlarge the uterine cavity, by means of compressed sponge tents.

First, a sponge of small circumference, one inch and a half long, was introduced, and left there for about eight hours; a time sufficient for its perfect softening and expansion. Immediately after its removal, a second sponge was introduced sufficiently long, nearly to touch the fundus uteri, and left there over night. I was now enabled to pass my forefinger almost its entire length into the cavity of the womb, so that I was enabled to examine its entire inner surface. No polypus could be detected, the mucous membrane seemed to be not perfectly smooth, perhaps, owing to the influence of the irregular surface of the sponge, which stuck very fast to it in every direction, when it was withdrawn. While thus examining the womb, there was a feeling as if the posterior wall protruded to a great extent, and as if a large hard body was situated behind the thickened lining membrane. This examination excluded the diagnosis of polypus uteri, verifying that of interstitial fibroid tumor. I now proceeded to introduce a glass-speculum into the vagina, and through it a syringe, which contained the liquor ferri sesquichlorati mixed with equal parts of water, making altogether about half an ounce. The mouthpiece being advanced up to the fundus uteri, its contents were emptied into the womb, and almost instantly rejected into the vagina. I took care not to remove the speculum as long as a drop of the solution came away from the os uteri. The first symptom was a burning sensation in the vagina, which was owing to a portion of the injected fluid, which came in contact with the vagina, when the speculum was withdrawn. The injection was made at eleven o'clock, A.M., April 30, 1858. When I saw the patient in the evening, she seemed to be much prostrated, always complaining of the soreness above-mentioned, and a dull pain in the lower part of the stomach, which corresponded with the uterus. I ordered cooling injections into the vagina, and a few doses of acetate of morphia. On the following day, her condition was not much changed; the sore spot less noticed; pains in the stomach increased; sensation of nausea; continued morphia. Third day; so low that she was scarcely able to move or speak; pain in the uterine region increased by the slightest touch; abdomen very slightly swollen; ordered stimulant drinks, opium with camphor. In the evening about the same; complained of headache and giddiness; pulse about 130; very feeble; abdominal pains not remarkably increased. Fourth day: very much prostrated; her family think she cannot live much longer; pulse scarcely perceptible; skin cold; constant nausea; no change in local symptoms; ordered brandy and quinine. Sixth day: feels a little stronger; pulse somewhat stronger; treatment continued. Seventh day: slowly improving; remarked a few drops of a watery discharge from the vagina. With returning irritability, the pain around the uterus is more acutely perceived, and I therefore had a blister applied above the pubic region, as soon as I considered her strong enough to bear all the pain and trouble connected with the dressing a blister. Recovery proceeded very slowly, and not without one or two alarming relapses, which threatened to carry her off. The discharge above mentioned continued for eight weeks, when she had, for the first time, a small flux of blood which lasted for five days. It was not before ten weeks from the day the injection was made, that she was strong enough to leave her bed, and then, only for a few hours at a time. One month after the first show, she had another discharge of blood which continued six days, but did not make an unfavorable impression upon the state of her health. At the end of August, 1858, she was able to leave her house to be removed to the country, where she gained strength considerably, and in a comparatively short time. Her menses appeared every fourth week regularly, diminishing in quantity on every succeeding turn, so that from October last, she professed to have her courses as regular, and in that quantity which every healthy woman ought to have.

Case 3.—Injection of a caustic solution into the uterus;—Severe metro-peritonitis—Recovery.—Mrs. K——, of Seventh Avenue, called at my office to be treated for fluor albus, of which she had complained ever since tne birth of her last child, which was now about two years old. She had been attended by several physicians, who prescribed internal remedies and astringent injections; but all to no avail, for as soon as she stopped using the syringe, the white discharge came on in undiminished quantity. Latterly, her courses had become very scanty, her strength began to give way, and she was constantly tormented by a pain in the small of her back. Upon examination, I found the vagina covered with a copious, thick, semi-transparent fluid, the uterus in its normal position, slightly sensible to the touch, very little hypertrophied, mouth somewhat open, its surface not quite smooth, both lips covered with red granulations, and bathed in a muco-purulent secretion from the cavity of the womb. This was no doubt a fair specimen of catarrhus uteri, and a caustic application to the diseased surface seemed to be the very thing that was required, as the only safe means of effecting a permanent cure. I, therefore, introduced the mouthpiece of an india-rubber syringe with long pipe, containing a few drops of a solution of one part of nitrate of silver to four parts of water, into the mouth of the uterus, and emptied the contents of the syringe very slowly into the womb. Most of the fluid returned immediately, and I am sure that the end of the syringe entered not further than one inch into the cervical canal.

When the patient stepped from the lounge she had to sit down quickly upon a chair, because of a transient sensation of fainting. This was at three o'clock, P.M., and about six o'clock I was called in haste to see her at her residence. I found her very low and uneasy, vomiting incessantly, and complaining of pain in her head. I learned that a few minutes after leaving my office she began to vomit, and continued to vomit to the time of my visit. There was besides, a dull pain both around the left ovarian and the pubic region, which increased on pressure with my hands; still the abdomen was not tense or swollen; pulse feeble, about one hundred strokes in a minute. I ordered Magendie's solution dissolved in potio Riveri, and linseed poltices to be applied to the painful spot. She passed a very uncomfortable night, feeling as if she was always near fainting, and vomiting as soon as she took the least drink. I found her on the following day very low and pale, so much that I felt alarmed about her condition, pulse one hundred and thirty, feeble, pain in the region of the womb increased. Ordered a large blister and powerful doses of opium with camphor, small pieces to be taken when she felt thirsty. Towards evening she was under the influence of the drug and felt somewhat easier. On third day, the vomiting had almost entirely ceased, but she did not dare to lift up her head, fearful of increasing the sensation of giddiness which she had experienced from the very first day of her sickness. The pain in the lower part of the stomach not increased, pulse falling. All the while not the least show of a secretion from the vagina was remarked. On the following days her condition was even more satisfactory, especially on the sixth day, when a flux of clear, bright blood had suddenly made its appearance. The blister was now permitted to dry up, and the patient was able to leave her bed on the tenth day from the time of the caustic application.

Case 4.—*Application of a solution of nitrate of silver to th*
e

inner surface of the womb—Death on the sixth day.—Mrs. U——, of Sixth Avenue, a slender woman of light complexion and an irritable disposition. When I saw her first (September 1856), I was called to attend her for the "whites" and "pains in the small of her back." Of her history I learned briefly that she was married about seven years ago to a man, who not only neglected her, but whom she suspected of having intercourse with prostitutes, from the fact of her having contracted a venereal disease, for which she could not account in any other way. Upon being questioned, she admitted that her disease might have been communicated to her by her husband. Although she was not able to trace the exact time when she began to suffer, she had been ill for one and a half or two years. The discharge of which she complained was at first very little and thick, becoming more profuse, watery, and somewhat offensive of late. This circumstance, connected with her growing daily thinner and weaker, induced her to seek medical advice, and she readily submitted to a thorough examination. The vulva and vagina were bathed in a serous, greenish, offensive fluid, and consequently were red and irritated. Upon examining the uterus with the finger, it was found that about two-thirds of the vaginal portion were gone, and what little remained, the seat of an irregular ulceration which extended far into the cavity of the neck. This part was laid open to view by means of a speculum. The surface thus exposed was of a dirty greyish color, with irregular, sharp cut protuberances, limited by a jagged margin which, towards the right side, embraced part of the laquear vaginæ. A small particle was taken away from this diseased spot for microscopical examination. It was afterwards found to consist of nothing but the natural elements of cervical portion, areolar tissue, and fibres of organic muscles, all of which were in a state of disintegration, presenting a granulated appearance, as if interspersed with molecular (fatty) corpuscula.

Diagnosis—Ulcus corrodens portionis vaginalis e causa syphilitica.

Treatment.—We are of opinion that most, if not all, the corrosive ulcers of the vaginal portions are chancres in a phagedænic state; we further believe, that the phagedænic chancre is a variety of the soft chancre, thus demanding no general anti-syphilitic but chiefly a local treatment. In this instance, at least, there could be no doubt about the nature of the disease, and never had any secondary symptoms occurred. On September 15th, the actual cautery was applied. An olive-shaped iron was heated white and brought in contact with the entire surface as far as it was diseased, and even passed into the cavity of the neck for a considerable distance. The pain experienced during the operation was trifling, and the patient rose from the table, where she was placed, and walked to her bed as if nothing had happened. The reaction which followed was insignificant, the pulse rising not above ninety strokes in the minute; the discharge diminished in quantity and quality, being less offensive and of a better color. The patient was ordered to take a strong decoction of bark and rich food, under which treatment she seemed to recover some strength. Ten days after the cauterization she was examined again, and the affected portion seemed to be in a fair way towards healing; instead of the ragged, pale surface, I found a fresh looking wound, partly covered with red granulations. Still some small spots were left, exhibiting traces of the old disease. I, therefore, thought it necessary to continue cauterization, though on a less active plan. Nitrate of silver seemed to be all that could be desired, and I dissolved a drachm in an ounce of water to be used for local application. The patient, therefore, was again placed on a table, the speculum again introduced, and a small camel-hair brush soaked in the solution just mentioned was applied to the ulceration. The place which had the most unhealthy aspect was that situated in the centre of the os tincæ, and thinking that the corrosion might have spread far into the neck, I introduced the brush into the cervical canal as far as I thought proper, but certainly not more than one inch or one and a half. When the patient was brought to bed, she remarked that the pain from this application was as great, if not worse, than that of the first one. Still she did not seem to have any alarming symptoms about her. When I saw her on the following day, there was a change in her expression; her features were not as lively as before; she felt very weak and complained of a pain in the lower part of her stomach. This pain she had felt coming on gradually ever since the operation, and upon closer examination it could be ascertained that its seat was in the womb itself; the discharge had entirely ceased, her skin was hot but moist, pulse about one hundred and ten in a minute. I was at a loss to determine the cause of these symptoms, considering it singular that the milder caustic should produce more serious symptoms than the stronger one. I ordered her to take the extract of hyosciamus in an emulsion of castor-oil, and warm poultices to be applied to her stomach. The two days following, she was much the same, and, therefore, she continued the hyosciamus and the poultices. On the fourth day she was rather worse; abdomen very painful and somewhat swollen; small doses of opium administered. On the night following, she was very restless, speaking as if in delirium, constantly grasping her stomach. On the fifth day, I found her fully prostrated, with a clammy sweat, a small, fluttering pulse, and only half conscious. I gave up all hopes of recovery, but ordered large doses of musk, which seemed to revive her, but only for a short time. Towards night she sank rapidly, and died about three o'clock, A.M., of the following day. No post-mortem examination allowed. Although no autopsy was made in this case, it is clear that the woman died from metro-peritonitis induced by application of a caustic solution to the inner surface of the womb. After the first application of the heated iron she was was in a fair way of recovery, as well with regard to the consideration of the local disease, as to that of her general system; she had begun to walk around the house, and had altogether a brighter look than before. But as soon as the nitrate of silver was used, she was suddenly and unexpectedly taken ill, with symptoms of metro-peritonitis, from which she ultimately died. Although at first I was not inclined to attribute the sudden change in the health of the patient to the caustic, I was at last forced to consider this application as the only cause of the inflammation of the womb and appendages, and I believe that every unprejudiced reader will agree in this explanation of the facts.

Art. III.—*The Sanitary and Dietetic Laws of the Hebrews, as related to Medicine: A paper read before the N. Y. Medical Union, Feb.* 24, 1859. By Mark Blumenthal, M.D. Resident Physician to the Jews' Hospital, N.Y.

Gentlemen: I appear before you this evening at the suggestion and request of some of my most highly esteemed friends and colleagues to occupy your attention for an hour in referring to, and explaining the Sanitary and dietetic Laws of the Hebrews, and their relation to Medicine. The desire to be informed, in some measure at least, in regard to the peculiarities of this people, and to know to what extent their Religious laws inculcate certain doctrines pertaining to food etc., is certainly laudable, and peculiarly interesting, even if not absolutely necessary to the physicians of this city, where the Israelites form a large and respectable part of the community, and among whom every practising physician has patients—in order (as a worthy friend expressed it), "to direct him in his conduct and advice, when treating a Hebrew—so that he may do nothing to hurt his patient's religious feelings, nor desire him to do anything contrary to the peculiar requirements of his religion." All honor to such high-minded motives; I feel happy in being enabled, though in ever so small a measure, to encourage this sentiment of toleration and liberality, which redounds no less to the honor of a good heart than a strong mind.

The subject, however, is one to which it is impossible to do full justice in the short time allowed me this evening, and it will therefore be barely possible for me to touch upon the most important ordinances or rather those which become of interest to the physician in his relation towards his patients. It may be urged by some, that they have seldom or never found any difficulties on this score; that they have for years attended Jewish families and do so still, without ever suffering, or even feeling the want of any more intimate knowledge of the peculiar religious or sanitary doctrines of their patients. This no doubt is true; but do or can these querists, conclude, from the fact that they have never been called to account, that *therefore* they have never offended their patients' religious convictions? Or are they sure that they have not induced their Jewish patients to commit acts contrary to their religious rites? The commission of which may perhaps have preyed at times upon their consciences and have caused them pangs of regret. But granted that such seldom occurs—would not every conscientious physician and gentleman of education and refined feelings prefer, not to take the responsibility of ordering anything forbidden, or wittingly to wound the feelings of any one? Certainly he would; and it is to these I offer the following remarks.

The customs of the Israelites at the present day, are altogether based upon the Biblical laws contained in the Pentateuch. They are of a religious nature; because they are conducive to the health and happiness of man. In fact, the preservation of health, corporeal and mental, being a religious duty among the Hebrews, all the regulations conducive to that object, become a part of their religion. It is in this sense that Moses says: (Deut. v. 33) "Ye shall walk in all the ways which the Lord your God hath commanded you, that you may live and it may be well with you *and that you may prolong your days.*" Many more passages might be quoted to prove that the tendency of the religious laws is conducive to the physical and spiritual welfare, the vigor of mind, and strength of body of the Israelites. It is consequently an admitted rule, that whenever a physician considers it absolutely necessary for the preservation of life, or the attainment of health, that any of the religious observances should be infringed, his advice is to be followed. Medical men however are recommended not to interfere unnecessarily with the established customs, unless they believe it really indispensable for the recovery of their patients;

thus leaving the decision in a great measure to the sense of honor and the amount of conscientious scruples of the attendant.

That the restrictions imposed upon the Israelites by their religion were, and still are, wise and useful, and conducive in the highest degree to the preservation of health, might be proven by a number of well-known and universally accredited facts. Thus they are remarkably exempt from the epidemic diseases which have from time to time swept over the earth and made such sad havoc among other nations. Scurvy and tapeworm are almost unknown among them and even syphilis is much less prevalent than among other nationalities. This comparative immunity is so well demonstrated that the Board of Health of Great Britain, in its report on the cholera prevailing there a few years ago, devotes a chapter to the elucidation of this remarkable fact, which is ascribed by it to the sanitary and religious laws which are observed by the Hebrews. It adds, that the same immunity prevails also in other countries among them, of which the report makes mention.

One more fact may be mentioned in this connection. During the dark ages, the Israelites, if at all tolerated, were compelled to live in the most crowded state and confined to the lowest localities in the various cities of Europe, under conditions undoubtedly every way favorable to the production of miasm, fever and pestilence. They nevertheless preserved their innate vigor of body and mind as their history, as well as their present state abundantly testifies. Having made these general and introductory remarks, I shall proceed to take up some of the special peculiarities, and whilst stating their existence, give at the same time such explanations for their existence as may seem satisfactory. I allude to this point more particularly and with emphasis—because the conviction is, it may be said all but universal among Christians, that their customs and prohibitions (particularly those in regard to articles of food and their mode of preparation) are ridiculous, and preposterous; and not only lacking the semblance of divine wisdom, but not even founded on common sense.

Gentlemen! nothing can be further from the truth. . . . Most of the ordinances have reasons assigned for their injunction; *why* certain articles are injurious and therefore forbidden, and where such reasons are not actualy put down, a little research or study of the peculiarities of the circumstances and times under which they were ordained, will usually satisfy all impartial minds of their wisdom and necessity.

In many instances modern science has corroborated what was told us over three thousand years ago (a striking illustration of the slow progress of the human mind as contrasted with divine wisdom and inspiration) and it is consequently doubly interesting to find boards of health and special commissions appointed at the present day,* to ascertain facts and recommend precautions identical with those ordained more than 30 centuries ago, by that great, unequalled legislator, Moses.

In elucidation of these statements, let us examine the ordinances of diet separately.

The Mosaic code divides all animals into two great classes, clean and unclean. The clean are declared to be useful and healthy as an article of food, but the unclean are forbidden. A more definite distinction, however, is superadded. In Levit. ii. 5, we read a list of the animals that are allowed and of those that are prohibited, "Whichsoever is cloven-footed and cheweth the cud, that shall ye eat." "Thus," says the Revd. John Townley (in his dissertation on the originality of the *Inst. of Moses.—Transl. More Nebochim*, p. 56. (Doctor Perplexorum) "Religion directed the choice of proper articles of food both with the heathen and the Hebrews; but with the latter the most wholesome food was allowed, and nothing was forbidden for any reason which tended to nourish superstition. But no good reason can be given for the Egyptians abstaining from mutton; the Syrians from fish; the Hindoos from the flesh of cows, or the priests in some countries from the flesh of animals of any kind." The same author furthermore says, (Townley, p. 64) "Various reasons have been adduced for the legal distinction between clean and unclean animals, by those learned men who have made this part of the Jewish polity their peculiar study." It will be found by the candid investigator that there are some great and leading reasons for these dietetic distinctions, in which all the best writers are agreed and which we may therefore safely consider as sound and Scriptural as well as rational. The sum of these is that these distinctions were intended,

1, To prevent idolatry; 2, To promote the health and comfort of the people; and 3, To influence the *moral character* of the nation."

We will not stop to discuss at length the various ways by which the prohibitions of certain articles of diet affected the religious sentiments of the people, but simply point out one or two considerations which force themselves upon the mind.

The Hebrew nation had been chosen as a holy people, that was to be specially dedicated to the service of God; hence all means that would tend to produce or inspire idolatrous notions were to be carefully avoided, nay—even means were to be employed to convince the people of the folly of worshipping different animals. How was this accomplished? In the first place by *permitting the use as food of such as were adored by the Egyptians* (a nation whose habits they had from long association partly acquired) and certainly it was not very likely that Israelites would regard with veneration animals which they were daily in the habit of eating.

---

* As in England—see London *Lancet*, 1858.

In the second place, by *being taught to regard with detestation such others as were held in religious veneration by the idolatrous nations.*

"Most of the creatures" (says the erudite Lewis, "Antiquities of the Heb. Republic") "which were pronounced unclean were such as were in high esteem and sacred among the heathen—as a swine to Venus, the owl to Minerva, the hawk to Apollo, the eagle to Jupiter and even the dog to Hecate—which gave occasion to Origen justly to fall into admiration of the wisdom of Moses, who so perfectly understood the nature of all animals and what relations they had to demons, that he declared all those to be unclean which were declared by the Egyptians and other nations to be instruments of divination and those to be clean which were not so." (Origen contra Celsum, lib. iv.)

Again,* "It is well known that the lion, wolf, dog, cat, ape and even frogs, rats, otters, beetles and flies as well as serpents and fishes, were held in idolatrous veneration by the Egyptians and other nations, and for which they were satirized by Juvenal—himself a pagan Roman.

The restrictions which were made with respect to diet had also another object. Owing to the disparity of tastes and customs engendered thereby, the people could not eat with their idolatrous neighbors, thus cutting off to a great extent social and familiar intercourse and preventing matrimonial alliances; in that way also evading the temptation to be led astray from the worship of the true God—a consideration, it must be conceded, of much importance when we remember that the Hebrew nation was then the only one not borne down by idolatry and destined to spread the true knowledge of God and his attributes.

We all know how often prejudices and preconceived ideas and resolutions not only *are removed* by intimate associations with different nations, and with people holding different opinions; but moreover how our religious convictions are sometimes weakened when we are not thoroughly and perfectly grounded in the principles of their truth and reliability. How much more is such companionship to be feared when the happiness of a people is involved just delivered from slavery and as yet but little used to liberty and independence of thought and action ; a people that had lived for centuries amongst idolaters and thereby became in a measure reconciled to the follies of the Egyptian worship. The probability of such a state of the public mind is rendered more plausible by the fact, that the Hebrews saw their oppressors, though idolaters, seated upon the very pinnacle of fame and worldly prosperity. Judging from effect to cause, it would naturally mislead them, and hence the necessity of those various wonders and miracles wrought before and during the delivery of the Hebrews to convince them of the existence of an overruling Providence against whom the false gods of Egypt were powerless.

---

* Townley, p. 66.

But I must hasten to the second reason given for these dietetic prohibitions, viz., "to promote health and comfort." The distinctions between clean and unclean appears to be based almost entirely upon their respective suitability or unfitness as articles of food. "While God keeps the eternal interests of man steadily in view," observes the learned Dr. Adam Clark in his commentary on the Bible (on Levit. xi.) " he does not forget his earthly comfort ; he is at once solicitous both for the health of his body and his soul. He has not forbidden certain aliments because he is a Sovereign, but because he knew they would be injurious to the health and morals of his people. Solid footed animals, such as the horse, and many-toed animals, such as the cat, are here prohibited. Beasts which have bifid or cloven hoofs, such as the ox, are considered as proper for food and therefore commanded. The former are unclean, *i. e.* unwholesome, affording a gross nutriment, often the parent of scorbutic and scrofulous disorders ; the latter clean, *i. e.* affording a copious and wholesome nutriment and not laying the foundation of any disease. Ruminating animals, *i. e.* those which chew the cud, concoct their food better than the others (which swallow it with little mastication), and therefore the flesh contains more of the nutritious juices, and is more easy of digestion and consequently of assimilation to the fluids and solids of the human body ; on this account they are termed clean, *i. e.* peculiarly wholesome and fit for food. The animals which do not ruminate do not concoct their food so well, and hence they abound with gross animals juices, which yield a comparatively unwholesome food to the human system. On the same grounds he forbad all fishes that have not both fins and scales, such as the conger eel, etc., which abound in gross juices and fat which very few stomachs are able to digest." Mons. de Pastoret (Moyse, considéré comme législateur et comme moraliste, chap. vii. p. 528.

Paris 1788), a celebrated French writer says: "One of the most distinguishing traits in the character of Moses as a legislator and one in which he was the most imitated by those who in after ages gave laws to the eastern world, was his constant attention to the health of the people. He forbad the use of pork and of the hare etc.; of fish without scales whose flesh is gross and oily, and all kinds of heavy meats as the fat of the bullock, of the kid and of the lamb; an inhibition supremely wise in a country where the excessive heat relaxing the fibres of the stomach, rendered digestion peculiarly slow and difficult." It is a remarkable fact and one certainly worthy of a passing notice that with the exception of the swine, none of the animals forbidden in the Mosaic code have become or are at the present day articles of common diet among civilized nations, and even with regard to this exception modern research is gradually laboring in a direction corroborative of the wisdom of the interdiction. At the present day, pork is considered as by no means easy of digestion, and the fact of its being so very frequently the possessor and habitation of the Cysticercus (which the interesting researches of Kuchenmeister, Von Siebold, Leuckart, Walther and others have proven to be rudimentary tapeworms), does certainly not tend to raise its value in the eyes of humanitarians. Indeed pork is without doubt the most frequent means by which this parasite is carried into the human body—there becoming developed to the great suffering and injury of the human organism.* Here then would seem to be a very palpable reason for placing the swine among the unclean animals, and the fact that tapeworm is almost unknown among the Hebrews goes towards justifying in a remarkable degree their abstinence.

In making dietetic use of the animals declared as wholesome, there are some peculiarities which I shall now proceed to mention.

The method of killing animals for food differs widely from that followed by other nations. Thus whilst death is produced in a bullock, for instance, even among the most civilized nations, by a blow upon the head, or in case of a calf or lamb by stabbing, the Hebrews have a certain method to pursue; and more than that, they have certain men appointed to do this duty. Instead of felling the animal with a blow producing concussion or compression of the brain, as the case may be, and thereby sudden stoppage of the heart's action, thus leaving the blood in the heart, arteries and veins, *the throat is cut* with a large keenedged knife, specially designated for such use and kept very sharp, thus severing the cervical arteries and veins and producing death by hemorrhage. The blood is thus discharged, as its use is interdicted in Levit. xvii. 22: "No soul of you shall eat blood, neither shall any stranger that sojourneth among you eat blood." And in Deut. xv. 23: "Thou shalt pour it upon the ground as water."

---

* The mere allusion to the occurrence of the cysticercus cellulosus, in the brain, globe of the eye, heart, liver and muscles is sufficient to indicate that it may be of serious and sometimes fatal consequence.

The reason for this prohibition I shall revert to presently.

And now comes that part of the process to which my allusions above when mentioning the Board of Health had reference. After the animal is killed (and I need hardly say that one evidently sick can not be killed for food) its internal organs are examined, especially the heart, the liver and lungs, the latter among other tests are inflated in order to discover whether the vesicles or air cells are all permeable; thus tubercles, emphysema, pneumonia, etc., are discovered. The intestines, too, must be examined for ulcerations, and the abdominal organs, such as the kidneys, spleen and mesenteric glands, and if the slightest traces of disease are found, the meat is declared unfit for food. Of course the person upon whom the duty of this examination devolves must be thoroughly acquainted with the anatomy and pathology of cattle. To prove his capacity he must pass an examination. Until he has declared the animal as healthy, its meat must not be sold for food.

Thus far then it would seem as though every necessary precaution had been taken; but before the meat is ready for cooking it undergoes still other processes. It is laid upon a board and sprinkled with salt in moderate quantity; after remaining so for 30 minutes it is washed and laid in water so as to dissolve and remove the salt. This process it is evident is simply a completion of the first step, namely to abstract all the blood before eating the meat.

As a logical consequence of the foregoing, no animal, whether mammal or fowl or fish, may be used that has perished by violence, whether such violence be caused by animals of prey, by accidents or by shooting. The products of the chase, therefore, are prohibited.

I am sure that many will coincide with me when I express my regret that some sanitary supervision, even if not so complete in all its parts as the foregoing, is not *universally* adopted. Its necessity is undeniable. Meat of all kinds is offered in our markets. No one has a legal right to examine (or if there be such ordinances we never knew them enforced) if it be pure and wholesome and to confiscate it if otherwise. It is a notorious fact that diseased animals are often slain, (just on the point of perishing from disease) both in the city and country, in order to dispose of the meat, when the living animal could no longer have found a buyer. How much disease may be ascribed to such unhealthy food it may be difficult to ascertain, but that such meat must necessarily be injurious and prejudicial to health may be confidently assumed.

The question will naturally present itself—why is blood so specially interdicted and so studiously and perseveringly sought to be avoided by the Hebrews.

Various reasons have been given for this prohibition by the learned Rabbis or doctors of ancient times. Moses Maimonides, who flourished during the latter half of the 12th century, and who is regarded not alone by his own nation, but by the learned of all creeds, as one of the brightest luminaries of his age, and probably the best informed man of his time upon the subject of the laws of Israel and the reasons thereof—after stating the abominations, cruelties and idolatrous practices to which the nations surrounding Israel at that time were addicted by reason of the blood which they used as food, or gathered in order to offer to demons, says (ch. xxi. on the Causes and Reasons of Precepts of the Eleventh Class): "For this reason, therefore, the divine law, which renders those who know it perfect, was given to eradicate those inveterate diseases, by prohibiting the eating of blood, and as in the case of idolatry, enforcing the prohibition by an additional sanction."

One of the principal reasons for prohibiting the eating of blood was then without doubt to prevent idolatrous practices. Rabbi Moses bar Nachman (better known as Ramban), also a very learned Spanish Israelite, who was born in 1194, and who like unto Maimonides and others united with a profound knowledge of religion, a knowledge of jurisprudence and physic, says of those idolatrous nations surrounding Israel, "They gathered together blood, for the devils, their idle gods, and then came themselves and ate of that blood."—*Townley More Neb.* p. 76.

Similar practices obtained among the Romans, since Horace thus satirizes the superstitious rites of his countrymen:

"Canidia with dishevelled hair,
(Black was her robe—her feet were bare—)
With Sagana—infernal dame—
Her elder sister—hither came.
With yellings dire they filled the place,
And hideous pale was either's face.
Soon with their nails they scraped the ground,
And filled a magic trench profound—
With a black lamb's thick streaming gore,
Whose members with their teeth they tore.
That they may charm the sprites to tell
Some curious anecdotes from hell."

Francis's *Horace*, Sat. 1, B. I.

The second reason why blood was not to be eaten, appears to have been that the Israelites might by this means be deeply impressed with the important truth that God is the sole author and disposer of life; and thereby maintaining a constant sense of dependence upon him, and of gratitude for his providential mercies.

The learned Calmet says, "God reserved to himself the blood of all sacrifices—as absolute master of life and death." "Blood being regarded as the organ of life, was therefore sacred to him from whom life was derived." * "For blood is the life, and thou mayest not eat the life with the flesh."—Deut. xii. 23, 24; Levit. xvii. 10–14.

A third, and perhaps the most interesting and important reason to the physician, is that the prohibition of blood served to check cruel and savage customs, and prevented the unrestrained indulgence of barbarous and ferocious inclinations. The Jewish rabbins assert that the injunctions against the use of blood were originally designated to suppress a practice, which they say obtained even in the time of Noah, of eating raw flesh, and especially of eating the flesh cut or torn from living animals, and devouring it whilst yet reeking with warm blood. † Plutarch, in his discourse on eating flesh, informs us, that it was customary in his time to run red hot spits through the bodies of live swine; and to stamp upon the udders of sows ready to farrow, to make their flesh more delicious; and Herodotus assures us (b. iv.) that the Scythians, from drinking the blood of their cattle, proceeded to drink the blood of their enemies. Dr. Patrick Delaney ‡ says, "There is a practice sufficiently known to obtain among the poor of the kingdom of Ireland. It is customary for them to bleed their cattle for food in years of scarcity;" and as a proof that these barbarous customs have scarcely yet ceased, the Analytical Review (vol. xxviii. July, 1798), says: "It will scarcely appear credible at a future time, that at this day, towards the close of the 18th century, in the islands and some of the Highlands of Scotland, the natives, every spring or summer, attack the bullocks with lances, that they may eat their blood, but prepared by fire." The celebrated traveller Bruce relates a scene he witnessed near Axum, the ancient capital of Abyssinia, where the Abyssinian travellers whom he overtook, seized the cow they were driving, threw it down, and cutting steaks from her, ate them raw *and then drove on the poor sufferer before them.* (Bruce's "Travels," vol. iii. pp. 332, 334). Sir John Carr states that the natives of the Sandy desert (between Memel and Koningsburg) eat live eels dipped in salt, which they devour as they writhe with anguish round their hands. (Cau's "North Summer, or Travels round the Baltic in 1804," p. 436, Lond. 1805.) And it is a well known fact that the savage natives of New Zealand continue to quaff the blood of their enemies when taken in battle.

---

* Townley, p. 78.

† Townley's Trans., p. 80.

‡ Doctrine of abstinence from blood defended, London 1734.

It is to prevent such cruel and barbarous customs that the Jewish law enjoined, that animals destined for food should be killed with the greatest dispatch, and their blood poured out upon the ground and not eaten. Thus, unnecessary cruelty to animals is evaded, and the deleterious effects of blood as an article of food avoided. For it is certain that all animals feeding on blood are more furious and violent than the ruminantia, and it can hardly be a matter of doubt, that its use by man tends to brutalize him—to arouse his more violent passions and brutal instincts—making him cruel and unrelenting, whilst the better feelings and emotions, for want of cultivation and practice, are sunk under the weight and force of his animal passions.

"Drinking of blood," says Michaelis in his "Commentaries on the Laws of Moses," vol. iii. p. 252, "is certainly not a becoming ceremony in religious worship; it is not a very refined custom, and if often repeated might probably habituate a people to cruelty and make them unfeeling with regard to blood; and certainly religion should not give, nor even have the appearance of giving, such a direction to the manners of a nation."

There is one other point under this heading that may receive a hasty notice. Israelites who live strictly in accordance with their faith, never combine at one meal meats with milk or butter. This observance is based upon the verse in Exod. xxiii. 19, and Deut. xiv. 21: "Thou shalt not seethe a kid in its mother's milk." No kind of meat or fowl can consequently be boiled in milk or fried in butter. Instead of the latter, other fats are used—particularly the fat of geese; and in countries where olives abound, as in France, Italy, Spain and Turkey, olive oil is used almost exclusively to replace fats in the cuisine.

Of fowls it may be said in general terms that all birds of prey are interdicted; and of fishes—all that are not possessed of scales and fins are prohibited. All animals living in the water and not possessing these are forbidden—hence oysters, shrimps, lobsters, crabs, eels, cockles, etc., should not be eaten. The reasons given above as causes for the prohibition of meats of difficult assimilation, appear to apply also here.

In contrast with these laws on food, let me here introduce the ordinances on abstinence.

One day in the year, called the day of Atonement, is set apart by the law and generally observed as a fast-day. From evening to evening, every Hebrew abstains from food and is engaged with acts of penitence and prayer. But though this command is general (Levit. xxiii. 27–30) it is understood to apply only to adults in health.

Thus, boys under 13, and girls under 12 years of age (the ages when they are respectively said to become responsible), are exempted therefrom. Indeed if children under that age even desire to abstain all day (*i. e.* 24 hours), they are not permitted to do so.

The humanitarian spirit of the ordinance goes even farther. Thus, a woman is not permitted to fast during the first three days after her accouchement. After that period it depends upon her state of health. Should it be considered prejudicial to her or her infant, she must not be allowed to fast.

In cases of sickness or debility from disease or even age, the command is not to be enforced. In fact whenever the physician declares that it is dangerous to life or even specially prejucial to restoration, his advice or order—supposing it to be based upon his honest convictions and not prejudice—is to be followed.

It is perhaps necessary I should mention that by fasting, the Hebrews understand abstinence from drink as well as from food.

Let us next look at the laws of cleanliness.

Purity of body as well as of mind and heart, is one of the cardinal principles laid down in the Old Testament. Bathing and washing are frequently commanded, and hence we find that in the description of the temple of Solomon, the lavers for bathing are frequently and repeatedly mentioned. Let us remember that these ordinances were given long before advancing civilization and science had taught the world the supreme excellences of water, and that its frequent employment must have contributed in no small degree to the sanitary condition of the people. Indeed the habit of washing and cleansing the body had become so impressed into the national character that it has descended to our generation as a religious custom; and well it might; for the preservation of health, and thereby of life, is certainly an essentially religious duty. To what *extent* this habit of frequent lavations has tended to preserve health it is impossible to ascertain, since other hygienic means were in common use at the same time, but I believe it only fair to presume, that it was not without its good effects.

The ancients practised, and even the modern oriental nations to this day preserve, the laws and habits of frequent bathing and washing. The frequency of eruptive and skin diseases, rendered such custom especially applicable, and in order to enforce it the better it was made with most of them a religious ordinance.

When, therefore, we recollect that these laws were more especially made for Palestine, situated in a hot climate, though equally adapted to other lands, they strike us as eminently wise. The fact that many of the secretory and excretory organs act more energetically in hot than in temperate and cold climates—particularly the skin, and that this excretion, especially when occupying the feet, is very often exceedingly offensive—is so well known as to require only its simple mention to remind us of the benefits of bathing. Manufactures and commerce had not then reached that universality which they now enjoy, and it is fair to assume that the mass of the people could not or would not supply themselves with such an abundant supply and change of garments, as is common in our day. Frequent ablutions, therefore, became the more necessary, both of body and garment. Indeed, we all know that the admiration of water by the civilized world has in modern times so strengthened and grown that a school has arisen, namely, the Hydropathic, which claims to cure all diseases to which the human frame is liable—by water. Those however (with but few exceptions perhaps) who have studied the human economy, its anatomy, physiology and pathology with care, and have devoted strong intellect and life-long application to its diseases, though admitting its great utility and good qualities, deny, and in my opinion deny with justice, the extravagant eulogia bestowed by specialists upon water as a remedy. The Rational School of Medicine of the present day, which may be termed the eclectic, or better, perhaps, the school based on our knowledge of the natural laws, physiological facts and clinical observation, is ready and willing to give water its proper place in the class of remedial agents, and frequently indeed, I hardly dare say frequently enough, is it employed in congestive and inflammatory diseases not only, but in its different states and forms as a positive remedial agent for diseases of the skin, rheumatic and gouty affections, and chronic diseases of internal organs.

The vapor, the douche, spout and the sand baths are proofs, (from their very existence), of the extensive application to which water is now put.

At this day, no man or woman in Israel commences his or her day's labor without first washing hands and face, at least; indeed it may be said that not even a child is left unwashed every morning among them; for as persons are considered unclean until washed, and as it is not permitted to offer up prayers to Providence unless clean (and to pray daily is as usual among them, even among the poor class, as it is uncommon among the same class of some other sects) washing has become a part of their religious rites. Thus when going to meals also, hands are cleansed, with the double object of cleanliness, and as preparatory to saying grace thereafter.

During the independent nationality of Israel more particularly, but even now also, bathing was obligatory after any disease of the skin, after sexual intercourse or even pollutions; after the cure of a gonorrhœa, after the menses, an accouchment, or the touching of a corpse. Not only was it customary to bathe in rivers, but wealthy families, even then, had baths in their houses. 2 Sam. ii. 2; (Wund. Talm. Med. p. 37). Thus both hot and cold as well as vapor baths were used. A point of interest however is, that even at that early day (I refer to the time of the glory of Jerusalem), the method now pursued in the so-called Russian baths was employed, namely the dashing of cold water over the bather immediately on emerging from a warm bath. Thus the Talmud in its allegorical style says: "He who takes a warm bath and is not directly after showered with cold water, is like unto iron, which has been treated by fire, but not hardened by water afterwards." Let me include under this heading one other important ceremonial law relating to the sexes. I allude to the operation of circumcision.

This command laid down by the patriarch Abraham (in Gen. xvii. 10–13.) and reënacted by Joshua upon the whole nation of males born in the desert on their way from Egypt to the Holy Land, has been adhered to by his descendants, the whole people of Israel, even unto this day.

It is foreign to our purpose this evening, however, to look upon the ordinance in its religious bearings; it is in its sanitary relations that it has interest in this connection, and as the first step in its elucidation, I will proceed first to describe the operation as performed by persons who are specially educated in its manipulations.

All anatomists know that the integumentary tissue covering the penis is very elastic and distensible, and that it naturally passes forwards over the glans penis, entirely covering it, just leaving in the central point a corrugated opening, through which the urine escapes, and being then reflected back as mucous membrane *under* the first layer and *over* the glans to its corona, where it is circularly inserted.

In circumcising (the tissues as already mentioned being very elastic and loose) the entire portion of skin covering the glans is drawn forward with the fore finger and thumb of the left hand and a section quickly cut off; the traction being thus taken off, the skin retracts and leaves the glans covered with the mucous reflection exposed. This is taken up between the fingers and thumbs of both hands, torn up to its insertion and reflected back of the glans. The integument is then drawn to meet it and thus it is allowed to heal. The effect of the operation is to entirely denude the glans of its præputial covering, and being thus left uncovered, its mucoid surface hardens by the contact of air, water, etc., and takes on the appearance and functions of integument.

The operation is completed by stopping hemorrhage if any exist, and by retaining the cut edges in their proper places by means of strips of lint, burnt sponge or linen. In the course of two or three days the wound is generally entirely healed by first intention. The reasons given for the institution of this ordinance by the rabbis, are various. I will add a few which seem to carry the most weight with them, and certainly are very plausible.

1. As the Biblical covenant, made by God with Abraham, to be observed by him and his generations forever, and which is to express the idea of the perfect devotion with soul and body of the circumcised to God and his service.

2. As a symbol of sanctification in the manner of the Christian baptism, in which sense Paul in his Epistle to the Romans (ii. 28–47) appears to have taken it.

3. As negation by an actual bloody protest against the Phallus worship of the heathen nations of that day, who worshipped the genital organs (Lingum and Phallus) as the symbols of creative power. (See Wunderbar, Talmud Med. p. 24.)

4. Circumcision was a condition of citizenship among the Israelites and a proof of nationality.

5. From its social import, as it is believed that circumcision tends to increase the procreative power.* And finally,

6. As a strictly sanitary or prophylactic measure, inasmuch as the organ can be kept much cleaner, which is really of some importance in regard to the fact that there is a sebaceous secretion between the glans and prepuce in the uncircumcised, which in hot climates is often the cause and seat of diseases which are prevented or at least much lessened in virulence by the excision of the prepuce.

In the East, as well as in other hot climates, there is a disease affecting these parts of which we here know nothing or very little at best. From an accumulation of this sebaceous matter, an inflammation of one or more of the sebaceous follicles before referred to occurs, which enlarge, indurate, become painful, and finally produce troublesome abscesses or carbuncloid sores.* Circumcision would prevent such disease.

---

* See Schneider and Henke: Zeitschrift für Staats Arzneikunde, 1825, vol. iv. p. 223.

Flavius Josephus states (Flav. de ant. Ind. Contr. Apion l. ii. 13) that Apion, an Egyptian, who wrote against the Jews and ridiculed them on account of their being circumcised, was himself finally forced to undergo that operation, for a very virulent carbuncle of those parts, but that the operation being performed too late he succumbed to the disease amid the most torturing pain.

Philo (Opera ii. p. 211) refers to this also in the following language: "It would therefore be better to abandon this childish sarcasm and to examine understandingly and seriously the causes which lie at the foundation of this operation; but there are reasons for maintaining this custom of the ancients; in the first place the prevention of a violent disease, and one very difficult of cure, which is called anthrax, and occurs easily with such as have a prepuce."

I have already mentioned above that by reason of the exposure of the glans, its mucoid surface becomes hardened and takes on the character of epidermis, thereby also becoming less liable to infection, a circumstance which may in a measure explain the comparative infrequency of syphilis among Israelites as compared with others—a fact believed by many physicians, and sustained particularly by Collin and Mombert.

It is here to be noted that both phimosis and paraphimosis, are affections from which those properly circumcised can never suffer. Many persons will not understand why we should be born with a prepuce if it is to be excised after birth. To them the following opinion may give satisfaction; and I am sure no words of mine can be so appropriate at the conclusion of this part of my subject as those of the great Maimonides once more. He says (Doct. Perplexorum, ch. xiii.): "In our opinion also the principal reason for circumcision was of a similar nature (that is, tending to purity and virtue), and intended not as some have conjectured, to supply a defect in nature, but a defect in morals; not to remove what was superfluous, but to restrain what was impetuous, and by a painful rite check an evil propensity, for our father, Abraham, was the first who commenced the practice, of whom it is recorded how much he feared sin and how holy and pious and chaste he was in all his conduct."

And now, gentlemen, let me detain you a few minutes longer in order to remove a false impression which has gone abroad, and which, I regret to say, received a new impetus perhaps by some remarks made by one of my predecessors in this course of lectures. The hymen was made the subject of a lecture or paper read here some two months ago, and all of you who heard it must have been both pleased and profited thereby. It conveyed to us, I dare say, all that is known at this day of its anatomy, pathology and importance in medical jurisprudence. No one here was more gratified than myself, excepting that in the course of the lecturer's remarks on the value of the hymen as a test of virginity, he spoke of its non-existence as being considered by the Jewish law as a proof of immorality, and that its absence would entail the punishment of death by stoning upon the poor maid. Far be it from me to blame the author of that paper for coming to such conclusions; on the contrary, I will demonstrate to you that, although wrong in his conclusions, they were necessarily wrong because based on false premises, for which he is not responsible. The opinion expressed by the lecturer was perhaps justified by the text—but the text itself is incorrect. The English version is, in this case, as in many others, not quite reliable, because the translators frequently disregarding the idiomatic expressions of the Hebrew language, gave a version very different from the original Hebrew text, in its meaning and explanation. The text as given in the English Bible is as follows, Deut. xxii. 13, etc., "And if any man take a wife and go in unto her and hate her, 14 And give occasion of speech against her, and bring up an evil name upon her, and say I took this woman and when I came to her, I found her not a maid: 15 Then shall the father of the damsel, and her mother, take and bring forth *the tokens* of the damsel's virginity unto the elders of the city in the gate; 16 And the damsel's father shall say unto the elders, I gave my daughter unto this man to wife and he hateth her; 17 And lo! he hath given occasion of speech against her, saying, I found not thy daughter a maid, and yet these are the tokens of my daughter's virginity, and they shall spread the cloth before the elders of the city; 18 And the elders of that city shall take that man and chastise him; 19 And they shall amerce him in a hundred shekels of silver and give them unto the father of the damsel, because he hath brought up an evil name upon a virgin of Israel; and she shall be his wife; he may not put her away all his days. 20 But if this thing be true and *the tokens of* virginity be not found for the damsel," etc.

---

* Wunderbar, Bb. Talmud Med. p. 16.

You will observe in examining the 15th and 20th verses that the words *the tokens of* are in italics, and all words printed in italics are interluded to make the sense, by the translation, and are not found in the original. Again the Hebrew word

"Betulim" which is translated in the 14th verse a "maid" is rendered in the 15th and 20th verses *the tokens of virginity.* If the interpretation of this passage were as stated by the lecturer, it would have been expressed in a very different way. It would have stated that if the husband does not find any signs of blood after the first sexual commerce, *he* is to come before the judges and make a complaint. *But this the text does not say.* Neither the hymen nor blood are mentioned. It is not the husband against the wife or her parents, but the parents of the wife, that bring the complaint against the husband for defaming their daughter.

The case then is this. If the husband after marriage takes a dislike to his wife. and as an excuse for his neglect maintains that he does not believe her to have had a good character before her marriage, then the parents are to come before the judges and bring witnesses to testify to the good and virtuous character of the girl; whereon the judges are to chastise him by fining him one hundred shekels and compelling him to keep her as wife—losing the right of divorce.

But in case the parents cannot bring witnesses to testify to the good character of the girl, but the husband proves by witnesses that she has been guilty of whoredom, then she is subject to the penalty of death, as chastity is a fundamental virtue in the Hebrew community.

The Talmud (from which this interpretation is taken, and which, as is well known, contains the authentic and original interpretations of the Biblical Laws as compiled from tradition about the third century) remarks that the word "bethulim;" (which in the English version reads "tokens of virginity") means, "the witnesses of her virginity" or as we should say in English "witnesses of her chaste conduct." And the expression "spread out the cloth," or as the original Hebrew text says, "spread out the garment," is an idiomatic Hebrew expression, corresponding with the words "clear her character." As if her character were exhibited even as a garment without stain, every trait and act being spread out for examination. *The Talmud does not make the hymen or blood a test of virginity;* on the contrary, it mentions the fact (and let modern critics remember it) that there are women, perfectly chaste, who owing to some disease or accident have not this sign of virginity, and mentions a family in which this organ was congenitally absent.

If then we were to translate said Biblical verses freely, according to the idiom of the English language, they would read thus;—If a man take a wife and go in unto her and take a dislike to her and give occasion of speech against her, and bring up an evil name upon her saying, I took this woman and married her, but now find people (or witnesses, deny her chastity. Then shall the father and mother of the girl, take and bring forth witnesses to testify to the character of the girl to the elders of the city in the gate. And the father of the girl shall say to the elders, I have given my daughter to this man as a wife, and now that he has taken a dislike to her he speaks against her slanderously, saying, I have found witnesses to deny her chastity, and here now are the witnesses (or *proofs not tokens*) to testify to the good character of my daughter. *So shall they clear her character before the elders of that city.* Then shall the elders of the city take that man and chastise him; and they shall fine him a hundred shekels of silver and give them unto the father of the girl, because he hath brought an evil name upon a virgin of Israel, and she shall be his wife; he may not divorce her all his days. I will only remind my hearers that our courts *at this day decide* the character of a female upon the same proofs.

As my highly esteemed friend, the Rev. Dr. Fischell of this city, to whom I owe the above Talmudical extract (for which I heartily thank him), says: "The women's rights women themselves could not demand greater consideration for their sex, than does the Mosaic Law."

I trust, gentlemen, that I have succeeded in showing that the Jewish statutes in their spirit, no less than in their practice, do not deserve condemnation. Whilst punishing outrageous crimes with death, they protect the innocent. The hymen was never believed by the judges in Israel to be a positive token of virginity nor its absence proof of vice. It excites our admiration that more than 2000 years ago, medical jurisprudence among the Jews upon this point at least had reached a point of perfection to which science in the latter half of the 19th century, labors to bring it, among the most enlightened nations of the earth.

Art. IV.—*Report of the New York Eye Infirmary, for January and February*, 1859. By F. J. Bumstead, M.D., Assistant Surgeon.

DISEASES OF THE EYE.

Caries of the Bones of the Orbit	1	Iritis	9
Aneurism within the "	1	" Syphilitic	4
Injuries of the Lids	1	Synechia	4
Inflammation and Abscess of the Lids	6	Prolapsus Iridis	1
Simple Tumors of Lids	7	Dislocated Lens	2
Cancroid " "	1	Cataract	18
Entropion and Ectropion	4	" Traumatic	3
Trichiasis	1	" Congenital	1
Diseases of the Lachrymal Passages	24	Asthenopia	8
Tinea and Lippitudo	47	Choroiditis and Retinitis	6
Hordeolum	5	Amaurosis (primary lesion unknown)	14
Conjunctivitis simple	126	Glaucoma	2
" purulent	1	Diplopia	1
" neonatorum	2	Myopia	1
" phlyctenular	103	Presbyopia	2
" granular	66	Paralysis of the third pair	1
Symblepharon	3	" " seventh "	1
Pterygium	3	Strabismus, converging	13
Keratitis	28	Hyperesthesia	2
Abscess of the Cornea	2	Sunken Globe	1
Ulcer " "	21	Injuries of Globe	9
Opacities "	22	Diagnosis not recorded	15
Foreign particles	9		623
Slough of Cornea	9	Diseases of the Ear	61
Staphyloma	5	Total	684
Conical Cornea	1		
Kerato-Iritis (aquo-capsulitis)	2		
Sclerotitis	5		

Operations.—For tarsal tumor, 1; for entropion and ectropion, 3; Bowman's operation on lachrymal passages, 3; for symblepharon, 1; for strabismus, 3; excision of globe, 4; removal of staphyloma, 1; for artificial pupil, 2; for cataract, 7, [four by keratonyxis, one by reclination, one by extraction, and one by linear extraction]; extraction of lens, dislocated beneath conjunctiva, 1. Total, 26.

Entropion and Ectropion.—In one case of inversion the roots of the lashes were destroyed by *scalping* the free border of the lid. In a second case, a triangular piece of the integument and orbicularis muscle was removed. In one case of eversion, a portion of the palpebral conjunctiva was exsected.

Symblepharon.—A case, in which there was a thick, fleshy adhesion between the lower lid and the globe, extending to the margin of the cornea, was successfully operated on by Dr. Agnew, by dividing the adhesion, and keeping the lid everted from the ball by means of a silver wire suture, attaching it to the cheek until cicatrization took place.

Strabismus.—All three operations were performed by the sub-conjunctival method as modified by Mr. Critchett.* In performing the operation by this method, the surgeon seizes, with toothed forceps, a fold of the conjunctiva, and divides it with blunt-pointed scissors, making an opening which does not exceed one-fifth of an inch in diameter, and which is parallel with the edge of the lids, and on a level with the lower margin of the cornea. In a similar manner he divides the sub-conjunctival fascia to the same extent. Through this aperture he introduces a strabismus hook, with rather a long beak, and bent at a right angle, sweeps it round the globe and passes it beneath the tendon of the rectus, which he finally divides with the blunt-pointed scissors, introduced through the same opening. The lids are kept separated during the operation by a spring speculum, and the patient, if restless, is put under the influence of an anæsthetic.

The advantages of the sub-conjunctival method are: the rapidity with which the wound heals without suppuration or the formation of fungous granulations, and especially the avoidance of sinking of the caruncle, increased prominence of the globe, or eversion of the eye—accidents which are frequently produced by the old method of operating. In all three cases, the result was perfectly satisfactory, although in one—the eye being affected with nystagmus—the prognosis before the operation was highly doubtful.

Excision of the globe by Bonnet's method.—An able article on this operation, by Dr. C. R. Agnew, appeared in the January number of this Journal, but as Bonnet's method is comparatively but little known in this country, some further remarks may not be out of place.

The cases to which it is especially applicable are those in which successive attacks of inflammation occur in a disorganized eye, and the sight of the opposite eye is endangered through sympathy with its fellow. Verily "there is nothing new under the sun," † and it is a singular fact that the idea of extirpating the disorganized eye under these circumstances suggested itself to St. Ives. In his "New Treatise of the Diseases of the Eyes," which was translated and published in London, in 1741, page 292, this author says: "If the *Humour* of a *Gutta Serena* damages but one *Eye*, there is room to fear lest the *Fever* return in the *Year*, and the other *Eye* be affected in the same Manner. I have, hitherto, observed this Misfortune happen to all those, when their *Gutta Serena* began by a light *Inflammation*, attended with violent *Pains* in their Head on the Side of the defected *Eye;* this Observation has induced me to think, though I never dare attempt it, that, by extirpating the decayed *Eye*, one might prevent the good *Eye* from falling into the same Misfortune; it would be a great Comfort to the *Patient*, to have his other *Eye* preserved from the Discharge of this destructive *Humour*, which, for the most part, happens, a Year or two after the *Loss* of the first *Eye*." The italics are in the original.

---

* See London Lancet, Am. Ed., July, 1855.

† A remarkable instance of this is pointed out in a recent lecture by Professor Simpson, of Edinburgh, who draws attention to the fact that the operation for vesico-vaginal fistula, introduced by Dr. Sims, was performed in nearly all its details by a Mr. Gossett, in England, and described by him in the *Lancet*, vol. i., for 1834–5, page 346. See *Medical Times* and *Gazette*, January 8th, 1859.

From the published accounts of the disease of the eyes, under which Prescott, the historian, suffered, there is every reason to believe, that his case was of the character in question, and that the sight of one eye might have been preserved by extirpating the other.

Of late years, however, the field for this operation has been somewhat extended, experience having shown that it is one of the simplest operations in surgery, and entirely devoid of any liability to unpleasant consequences. Its value is, indeed, more evident to the patient, when, having already lost one eye, he finds himself in danger of being totally deprived of sight; but it cannot with safety be left as a mere *dernier ressort*. In many instances, even when resorted to at a very late period, it will still be efficacious in effecting a cure, as in the cases reported in the paper of Dr. Agnew, already referred to. But even here, much valuable time will be lost, and a considerable amount of risk run. It is certainly a far safer course to pursue, to extirpate an eye, the vision of which is irretrievably lost, just as soon as it exhibits any signs of deep-seated inflammation. And we may go one step further, and assert that this operation is advisable in all cases of one disorganized eye, independently of any existing attack of inflammation, among sailors and others whose avocations call them to a distance from surgical advice. It is indeed true that such persons may go through life without inflammation being set up, but the chances are strongly against it, and the danger is sufficient to justify the surgeon in recommending extirpation.

We may classify the cases in which Bonnet's operation is recommended as follows:

1. Cases in which deep seated inflammation occurs in a disorganized eye, whether the opposite eye sympathizes with it or not.
2. In all cases of disorganized globes in persons laboring at a distance from surgical advice.
3. Cases in which a foreign body is lodged in the eye.

4. Cases of sightless eyes, in which the lens is dislocated into the anterior or posterior chamber—the ordinary operation of sinking the eye being extremely liable to the occurrence of hemorrhage from the retinal artery and the choroid, followed by weeks of acute suffering while the clot is eliminated by suppuration.

5. Cases in which deep-seated hemorrhage occurs during the operation for extraction—as recently advised by Dr. Agnew.

6. Cases in which one eye is disorganized and the other requires an operation for artificial pupil or cataract.

7. Cases of extensive staphyloma involving the sclerotica.

8. Cases of extensive symblepharon with complete opacity of the cornea, such as often follow burns, and the irritation and deformity of which cannot be remedied by any other operation.

The stump left after Bonnet's operation is not quite so freely movable as after the ordinary operation of sinking the eye, which is, to a certain extent, a disadvantage, when an artificial eye is to be worn. The difference, however, is not great, and is more than counterbalanced by the advantages of Bonnet's operation already enumerated, and also by the fact that an artificial eye can be worn with far less inconvenience, and without danger of its exciting inflammation in the stump.

The following are some of the cases operated upon by this method, at the Infirmary, during the last two months:

Case 1.—F——, an Englishman by birth, and peddler by profession, admitted to the Infirmary under the care of Dr. Bumstead. Patient lost his left eye-sight years ago, in consequence of a blow received in England. For the last five years has been a peddler in this country, travelling with his wagon from State to State, chiefly in the South and West. During this time he has had four attacks of inflammation in the sightless eye, attended with excruciating pain, involving the whole side of the head, and the opposite eye sympathizing with its fellow, as shown by injection of its vessels, pain and great photophobia.

On the occurrence of each of these attacks he has been obliged to leave his wagon, and hasten to some city where proper medical aid could be procured. Under antiphlogistic treatment, continued for several weeks, the disease has always been subdued, and the patient has been able to return to his employment.

He has now come to New York from the western part of Virginia, to seek relief from a fifth similar attack. The globe is found to be softer and less full than natural, quadrilateral in its form, and its conjunctival and sclerotic vessels intensely injected. All power of distinguishing between light and darkness has been lost for eight years. Patient suffers excessive pain in the globe, and on the corresponding side of the head. The opposite eye is slightly injected, and quite intolerant of light.

The patient was allowed the choice between two alternatives, viz.: the usual treatment by means of cupping, antiphlogistics, etc., which might succeed in restoring him to as good a condition as he enjoyed before the present attack, but which would require several weeks absence from his business, and leave him liable to similar attacks in future—or excision of the eye, which would enable him to leave the city in a few days, afford protection for the future, and insure the integrity of his opposite eye. He chose the latter course.

The disorganized eye was excised by Dr. Bumstead, according to Bonnet's method, and, on the fourth day after, patient returned to his business, with entire relief of his symptoms, and with the ocular stump sufficiently healed to support an artificial eye.

Case 2.—J. R., aged 48, came to the Infirmary May 7th, 1848, with a dislocated lens floating in the posterior chamber, injection of conjunctival and sclerotic vessels, and intense pain in the globe and corresponding side of the head (the left). He stated that he had been perfectly blind in this eye for 25 years, but could give no history of his case. Was not aware that he had ever received any blow in the neighborhood of this eye.

Excision of the eye was recomended at this time, but patient declined. He was treated with hyd. cum creta cum quinia until June 14th, when his symptoms were entirely relieved, and he ceased attendance.

Patient returned to the Infirmary Feb. 5th, 1859, with an abscess of the cornea, extensive effusion of lymph in the anterior chamber, concealing the pupil and the greater portion of the iris, intense conjunctival and sclerotic injection, and severe pain in the globe and side of the head. These symptoms have existed for about a week.

There is evidently no hope of saving the eye, and even if it could be done at the expense of weeks of suffering, its usefulness as an organ of vision has long since been lost. The pain is so severe that patient is anxious for an operation.

Feb. 5th.—Dr. Bumstead excised the eye by Bonnet's method.

Feb. 7th.—The severe pain has entirely subsided since the operation. Patient experiences only an occasional uneasy sensation in the stump, which is entirely covered with the flap of conjunctiva, with the exception of a surface which may be covered with a five cent piece.

On examining the eye after its excision, the vitreous was found to be diffluent, and containing a large amount of fibrinous matter, the retina extensively detached, and the choroid deprived, in a great measure, of its pigment.

Case 3.—M. H., aged 25, entered the Infirmary Jan. 19th, under the care of Dr. Bumstead. Patient can give no satisfactory history of her case, except that she lost the sight of her left eye when about 10 years old, after gazing at an eclipse of the sun.

This eye is now found to be rather more protuberant than the right; the pupil widely dilated and immovable; behind and below the iris can be seen the lens dislocated in the posterior chamber, and of a dense chalky white color. There is a zone of injected sclerotic vessels around the cornea. Patient suffers severe pain in the eye, and around the orbit, especially at night. No perception of light in the eye. Opposite eye sympathetically affected, and highly intolerant of light.

It was evident that in this case we had to deal with a *calcified* lens, dislocated and resting upon the retina. It was also stated to the gentlemen present at the clinique, that we should probably find a plate of calcific matter in the tunics of the eye, as such accompany very frequently a calcified lens.

Dr. Bumstead excised the eye by Bonnet's method.

On examining the excised globe, the optic nerve, at its entrance, was found to be partially atrophied. On dividing the globe into anterior and posterior halves, a very beautiful appearance was presented. The choroid preserved its normal black color, forming a background which contrasted finely with the dislocated and calcified lens, which was of a pure white color, and lay upon the posterior surface of the iris and ciliary processes.

A plate of calcific matter was also found, as had been anticipated, in the tunics of the globe. This plate was of the size of a ten-cent piece, and its centre corresponded to the entrance of the optic nerve. Its edges were sufficiently sharp to cut the fingers when pressed against it. It was clearly deposited in the choroid, and overlying it and the retina, was a thick layer of firm fibrinous matter which encroached upon the posterior chamber of the eye.

Jan. 21*st.*—Two days after the operation. Pain entirely relieved, the patient having been free from suffering since the excision. Stump well covered, and freely movable in correspondence with the opposite eye.

Operations for cataract—Extraction.—Mrs. T., aged 66, with hard cataract of both eyes, and just able to distinguish light, admitted under the care of Dr. Agnew. Patient was an unfavorable subject for any operation, being quite feeble, exceedingly timid and nervous, and in a state of senile atrophy.

Extraction was performed upon the right eye by Dr. Agnew, Jan. 19th. The steps of the operation were those usually adopted at the Infirmary. Patient in the recumbent posture upon a table; the operator sitting behind and elevating the superior lid; an assistant depressing the lower lid; the knife the narrow one of Sichel; the section of the cornea superior.

The lens was extracted without difficulty; the pupil assumed a central position; the lids were closed with isinglass plaster, and the patient removed from the table to bed. Two grains of quinine were ordered to be administered three times a day, also beef tea and wine whey.

On the evening of the operation, she experienced some pain in the globe which lasted three quarters of an hour, and then subsided. The following day she was quite comfortable, and there was no swelling of the lids, or other indication of inflammatory action.

Jan. 25.—Six days after the operation. All the symptoms were favorable until last night, when the patient was seized with a fit of sneezing. During the act, she "felt something give way in the eye." The plaster is removed and the eye examined to-day for the first time. The flap of the cornea is found to be ununited for two-thirds of its extent. Its edges are transparent and not hazy, favoring the supposition that the separation is secondary, and the result of the sneezing last evening. The iris is protruding between the edges of the wound, and the pupil is drawn upwards, though sufficiently large for visual purposes.

Belladonna is now applied around the orbit; the lids again closed with plaster; quinine, beef tea and brandy, ordered to be given freely, and the patient allowed to sit up.

It is unnecessary to trace the progress of the case from day to day. Suffice it to say that the attempt to produce coaptation and adhesion of the edges of the wound was unsuccessful. The hernia of the iris was, however, but slight, and the protruded portion, aided by occasional applications of a solution of nitrate of silver, ℈ij. to ℥j. water, partially collapsed, and has now become glazed over, forming a firm cicatrix. The pupil is drawn somewhat upwards, but is sufficiently patent, and the cornea is clear. Patient is now able to go about by herself and to see all objects not requiring nice visual power. Some opaque capsule obstructs the pupil, which is to be removed by Keratonyxis, when a still more satisfactory amount of vision may be anticipated.

"*Linear*" *extraction.*—This was a case of traumatic cataract of a few days' standing. The wound of the anterior capsule which produced the cataract, had left an opening for the escape of the substance of the lens into the anterior chamber. This was filled with the disengaged fragments, the presence of which excited great irritation in the globe. Dr. Bumstead performed "linear" extraction, by puncturing the cornea near its lower edge with a broad needle, and introducing an ordinary grooved director through the opening thus made, the lens matter was discharged through the groove. The irritation was relieved on the withdrawal of the cause which excited it; farther absorption of the lens has taken place, and the patient has now good vision with this eye.

Extraction of dislocated lens.—This was one of those singular accidents in which a blow produces rupture of the sclerotic, and dislocation of the lens, beneath the conjunctiva.

In the present case the lens was lying external to the sclerotic, above the cornea, and causing a protuberance of the conjunctiva. The conjunctiva covering it was divided by Dr. Hinton, and the lens extracted. This operation was resorted to, not with any hope of restoring vision, which was irretrievably lost in consequence of the blow, but to remove the source of irritation produced by the friction of the lids against the tumor.

274 Sixth Avenue.

Art V.—*Remarks on the Treatment of Fractures of the Thigh, with a new Apparatus. With report of Cases* (*continued from page* 189, vol. v.) By J. H. Hobart Burge, M.D., Surgeon to Brooklyn Central Dispensary, late Surgeon to the New York Dispensary, etc.

On looking over my previous communications to the Journal, I am surprised to find that I have altogether omitted to mention one peculiar advantage which our apparatus (now pretty generally known as "Burge's Apparatus for Fractured Thigh") possesses over the ordinary straight splint of Desault and Physick. I allude to an advantage which needs only to be mentioned in order to gain the hearty assent and appreciation of every surgeon. It is, that the counter-extending pressure falling only upon the nates and tuberosities of the ischia, does not interfere with the circulation in the injured limb, and consequently there is much less swelling of the foot and leg than when the counter-extending pad nearly encircles the thigh, and presses upon the groin as it always does in the common straight splint. Another advantage, growing out of this peculiarity, is that the limb may be permanently dressed and extension made (generally) several days earlier than is customary with the straight splint, and thus the patient most effectually preserved from those painful twitchings of the muscles which are so common in these cases. The great practical importance of leaving the circulation in the limb as little obstructed as possible by our surgical appliances will be so obvious to the reader, that I shall not enlarge upon it.

I take this opportunity of inviting the special attention of naval surgeons to the excellence of our apparatus in shipboard cases. A simple platform six feet long and two feet wide, slung with ropes at the corners, suffices for its support. It should of course be well secured; and then amid all the rolling and lurching of the ship, the patient will rock and rest like a child in his cradle. My observations upon this point are not entirely theoretical. Having spent more than one year in the capacity of ship-surgeon (though not in the navy), I know well the difficulties to be overcome.

Among the cases already reported in this series are two, the records of which were incomplete at the time of publication. As we design these reports for future reference and comparison, we will say a word upon *them* before we proceed to detail new cases.

In reference to Case 3, which was a fracture of the right femur, and also of the left tibia,* I need only add that firm union was the result in both limbs, without deformity, and if there was any shortening, that of one limb exactly compensated for that of the other, as they remained of equal length.

With regard to Case 8,* we expressed considerable doubt as to the future usefulness of the limb. We are gratified now to be able to state that the union became perfectly firm. There was false anchylosis of the knee, which, however, yielded to passive motion and the douche; and gradually the patient gained power over the limb till locomotion became good. There is no bowing at the point of fracture, and although there is a shortening of three-fourths of an inch it is hardly perceptible in the gait.

The following case was treated in the United States Marine Hospital, Detroit, Michigan, by Z. Pitcher, M.D., ex-president of the American Medical Association, who kindly communicated it to me. I will give it in his words.

Case 14.—"The patient was an adult, and otherwise in good health. The injury was caused by the fall of a steamboat fender across the thigh two inches above the condyles of the femur by which the bone was not simply fractured, but crushed.

---

* *N. Y. Journal of Medicine*, May, 1857.

He was put into the apparatus on the 26th of July, and was released from it on the 5th of September, during which time he scarcely made a complaint that could be attributed to the apparatus itself. The fractured limb will not be over one-fourth of an inch shortened and the motion of the knee joint is now (September 16th), nearly one-half its normal extent." In commenting upon this case the doctor says: "I have been much pleased with the working of the apparatus, particularly with the action of the counter-extending straps, and the means of preserving the curve of the fermur during extension."

After a kindly suggestion in reference to adding a foot-piece by which, in his opinion, the value of the instrument would be increased, he says, "a little modification would make it the best apparatus extant for the treatment of morbus coxalgia."

Case 15.—Was treated at Bellevue Hospital. Dr. James R. Wood, visiting surgeon. Dr. Charles Phelps, house surgeon: Dr. Bab. assistant surgeon, kindly transcribed for me the following record:

"Celia Farmer, Irish, married. Is not sure of her age, calls herself 60, is apparently 70 or more, of good constitution, and moderately temperate habits. Admitted to the hospital, Dec. 28th, 1858. On Christmas eve, fell from a ladder, a distance of eight feet, striking the outer side of the left thigh across the edge of a large iron kettle. Upon examination there was found to be great pain, and much ecchymosis at the seat of injury, particularly on the outer side of the limb. Limb shortened two inches, and a fracture easily discovered just above the condyles. It was slightly oblique, downward and forwards, the upper fragment overlapping the lower, anteriorly. Treatment: At first, limb merely placed in a comfortable position. Jan. 3d, Limb still two inches short. Burge's apparatus applied with splints of coaptation, and adhesive plaster extension. Whisky given daily. On account of the age and infirmity of the patient it was not deemed advisable to make very forcible extension.

"March 1st.—Apparatus removed, union firm, no apparent shortening except by careful measurement, and then not more than three-eighths of an inch. Has been very comfortable during the whole course of treatment, sitting up daily. April 1st, walks without a staff."

The next case being one of unusual interest, I need make no apology for detailing it at some length. The fracture was at the cervix, and united firmly with loss of the cervix. The patient dying some weeks after of phthisis, the specimen was secured by Dr. James R. Wood (who had charge of the case), and presented to the New York Pathological Society, January

27, 1858, with appropriate remarks, after which he gave the following history of the case.

Case 16.—" The subject from whom this specimen was taken was 57 years of age at the time of the accident, May 20, 1857, and although not very robust, still enjoyed good health. He was not strictly temperate, neither could he be considered intemperate, judging from the history he gave me of his habits. When a young man he contracted a chancre, which was treated as soon as it was noticed, and was not followed by any discoverable constitutional symptoms that I could ascertain. He came under my charge May 23d, nearly three days after the accident, of which he gave me the following account: While descending a stairway, he slipped a few feet and fell, striking the post-lateral portion of the left trochanter major against the edge of one of the steps. On recovering himself he found he could not move the left lower extremity, but supposing at the time that he had suffered no serious injury, he did not seek surgical advice, as he thought he should recover in a few days, and resume his trade, which was shoe-making. Finding, however, that he grew no better, he came under my charge, presenting the following symptoms: Shortening of the left lower extremity a little over an inch; eversion of the foot; inability to elevate or rotate the limb inwards, and very well marked osseous crepitus when extension and rotation were made. He was examined by a number of medical gentlemen, who were all of the opinion that a fracture of the neck of the bone existed, but differed from me in not expressing an opinion as to its seat. Taking into consideration the age of the patient, and the small segment of a circle described by the trochanter major when extension and rotation were made, I supposed it to be a fracture of the neck within the capsule. The only treatment adopted for the first three days, was to place the limb in as easy a position as possible. On the 20th of May, a long strip of adhesive plaster was applied along the inner and outer aspects of the leg and thigh, forming a loop a couple of inches long, below the foot. The limb was then snugly bandaged, and secured to a splint that extended from a body-belt to a point eight or ten inches beyond the foot. Extension was then made by connecting the screw in the lower end of the splint to the loop of adhesive plaster, and the counter extension made by a perineal pad that was attached to the upper end of the same splint. The extension was increased from day to day, keeping the limb at nearly its normal length, until the fourth day, when the perineal pad, although soft, had chafed him so much that it had to be removed. He was then placed in an apparatus invented by Dr. Burge, with which counter-extension is made over the tuberosities of the ischia. and extension by means of the screw at the lower part of the long splint. In this apparatus his pelvis was held secure and at rest, by being confined by the splint on one side, and a movable support on the other. On June 24th, it was found necessary to re-dress the limb, as the bandages had loosened over the leg, and the plaster began to slip. At this time there was half an inch shortening by measurement. He bore this treatment very well. No change was made from this time until July 19th, when the apparatus was dispensed with. The limb still continued half an inch shorter than the uninjured one, and judging from the examination made at the time, union was supposed to have taken place. Having complained of considerable pain in the joint when moved or left unsupported by a pad behind the trochanter major, a blister was applied with the supposition that some inflammation existed within the capsule. This was followed by relief for some days, after which it was considered proper to repeat it, and so on, at intervals, for some weeks, at the end of which time he could forcibly push himself up in bed by placing the foot of the injured limb against the footboard of the bedstead. He never recovered, however, so as to walk about, although he would stand on the limb whenever he was desired to do so. On the 19th of August he was attacked with acute bronchitis, which soon yielded to treatment. As some cough and expectoration continued, a thorough examination of his chest was made, and it was found that tubercles were softening in the anterior portion of the lungs. With but few exceptions, he was confined to his bed till the time of his death, Jan'y 23d, 1858."

Autopsy 23 *hours after death.*—Lungs found extensively diseased. The present specimen was then removed. The neck of the bone is entirely gone, the head being firmly united directly to the trochanter major. This specimen has been placed in the museum of Bellevue Hospital to throw what light it may upon the vexed question, "Do intra-capsular fractures ever unite by bone?" I have examined it carefully, and must admit that I do not consider its testimony clear upon this point. Like all specimens which I have ever seen of the sort, it leaves room to suspect that the fracture was both within and without the capsule.

Case 17.—Wm. Carroll, aged 16, Irish, confectioner. Admitted to New York Hospital, July 22d, 1858. Dr. Parker visiting surgeon, Dr. Shrady house surgeon. At 6 P.M., the patient, a strong, healthy person, while walking with a companion, was tripped up by the latter who fell with his entire weight across his lower right limb. On admission, there is found to be a fracture of his right thigh just above its middle. No crepitus distinguished, but free mobility at seat of injury. Shortening one inch.

Treatment.—Position decubitus, limb placed on double inclined plane. Aug. 2d.—Limb put in long splint. Aug. 6th.—Shortening little less than one inch. Aug. 12th.—A slough has made its appearance in the perineum, but is comparatively superficial; it is oblong in shape, and covers an area of about two square inches. The counter-extending band loosened. Up to this time the leg was down to its full length. Aug. 17th.—Slough gradually clearing off. Shortening now about five-eights of an inch. Aug. 21st.—Some mobility at point of fracture, shortening half an inch—limb put up in Burge's apparatus—slough in perineum has all cleared off, and the ulcer is granulating. Sept. 15th.—Apparatus removed to-day. Extension has been kept up in such a way that there is *no* shortening—no deformity—union perfectly firm. Limb placed on double inclined plane. Oct. 5th.—Moves about the ward on crutches. Subsequently discharged cured.

The readers of the Journal will not fail to observe that this makes four *consecutive* cases treated on our apparatus, in New York Hospital (by different surgeons), in which the record shows *no shortening*, and *no deformity*. So rare, indeed, have been these *perfect results* in the history of surgery, that many excellent surgeons have supposed them impossible, and doubtless some will now suspect that these were cases *selected*, in order to make a *good report.* We invite special attention to the circumstances of each case and to the names of those under whose surveillance they were treated.

We have other cases in progress which will soon appear. The record of one other has just been kindly sent me, but as there are points requiring further explanation by the attending sursurgeon, I withhold it for the present. It has often been remarked that conservatism is carried to such an extreme by the members of our profession, that anything new is sure to be violently opposed, if not rejected. I am happy to bear witness that no such spirit has been manifested towards our humble effort, and that, except in one or two rare instances, we have received the most cordial congratulations of our professional brethren.

ART. VI.—*Clinical Lecture on Ununited Fractures, delivered at the New York Hospital, on 23d November, 1858.* By THOMAS M. MARKOE, M.D., Attending Surgeon.

GENTLEMEN: We have a case in the house upon which I propose to operate this morning, of ununited fracture of the femur, and the occasion seemed to me to be a good one to ask your attention to this very important subject of non-union of fractured bones. In the minds of the non-medical public, the failure of union after fracture is presumptive evidence, which they do not fail to receive with great readiness, of incapacity, or inattention on the part of the surgeon in charge. Let me caution you in the outset of our discussion, not to allow yourselves to entertain any such sentiments; for while it is true that real knowledge, joined to practical experience and assiduous and careful attention, will go very far in diminishing the number of failures; yet we are obliged to acknowledge that after all has been done that science, skill, and care can do, there will remain a certain number of these unfortunate cases in which union fails, either in whole or in part, to be accomplished. The proportion of these cases to the whole number treated, is, happily, small—not greater than 1 in 600 or 700, according to the only author whom I have ever met with who pretended to make any estimate on the subject, and I should judge that the ratio he mentions was not very far from the true one.

In considering this subject, I shall call your attention to four principal heads. 1st. To the pathological condition of ununited fractures, or the anatomical features they present on dissection. 2d. To the symptoms of, and the effects produced by ununited fractures. 3d. To the cause of failure of union. 4th. To the proper treatment of such cases, and its results. And in commencing, I must remind you that we may throw out of our calculation altogether that class of cases in which union is merely delayed beyond the usual period, and in which nothing is required but time and patience. I shall only speak of such cases as remain uncured after all due patience has been exercised, and all necessary time allowed, and which evidently show, six months or a year after the injury, that nature is not able, without some assistance from art to complete the wished for cure. Thus narrowing down the field, we find, on dissection, that the fracture presents one of the four following conditions:

1. *No Union*
2. *Ligamentous Union.*
3. *Union by Fibrous Bands.*
4. *False Articulation.*

1. *No union.*—It is exceedingly rare that we find on examining an ununited fracture no trace whatever of reparative attempt. Nature is so uniform in her operations that even when the circumstances are unfavorable for perfecting union, the process is generally commenced and carried on, as near to perfection as the opposing influences will permit. Sometimes, however, it does happen that either the system is so borne down by some wasting and rapidly exhausting disorder, or the

local conditions are so entirely incompatible with union, that the reparative nisus is not in the slightest degree excited; and on examination we find no change in the ends of the fragments which would indicate even the commencement of bony exudation. This condition is sometimes shown in cases of severe, and finally fatal injury, in which the constitutional powers never fully rally from the depressing effects of the injury, or its immediate consequences, and where, though the patient may linger many days, or even weeks, no attempt at bony exudation is found on dissection; and it is well illustrated in this specimen, taken from a case of ununited fracture of the femur, in which the fragments were separated from one another by the interposition of a thick layer of muscles; and here you see not only that no attempt at union has occurred, but the ends of the bone are rounded off, and in fact atrophied.

2. *Ligamentous union* is the term most commonly applied to cases where union does not take place, but where the uniting medium remains soft and flexible, instead of becoming ossified, and this is by far the most common condition in which ununited fractures are found on anatomical inspection. In order more fully to understand this state of parts, I must call to your recollection the actions which go on in the healthy repair of fractured bones. And here I need not detain you with all the minutiæ of provisional, intermediary and definitive callus as we used to study them in former days. Mr. Paget has done the student good service in showing that these more complicated processes are not the usual processes of repair in man; and that in our bodies, accidents to the bones are repaired very much on the same principle as that on which the carpenter mends a broken stick. The glue is placed between the fragments just where they need it, and not around about them, as we find is the case in the inferior animals. There is usually no provisional callus in man; and the process of union consists merely in the pouring out between the fragments, in the most favorable positions for uniting them, a substance which is at first soft, and gradually becomes firmer, and as it organizes, becomes first usually fibrous, sometimes fibro-cartilaginous, and finally osseous, assuming in the end the perfect structure as well as the firmness of original bone. Now, this process of transformation of the uniting medium may be arrested at any stage of its progress; and if it be so arrested at a point short of osseous consolidation, the result is what is called ligamentous union. In such instances we find that sufficient of the uniting material has been poured out, and that the broken ends are well glued together, but the glue is soft, and allows such a degree of motion at the seat of fracture as to make the limb useless for the ordinary purposes of locomotion. This condition of things is most commonly due to constitutional causes, and it would seem as if the powers of repair were sufficient to produce the uniting substance in proper quantity, but were not able to effect its elaboration into bone.

3. *Union by fibrous bands.*—The third division in this table embraces cases which are closely allied to those last under consideration. In these the uniting material is not poured out between the fragments in proper quantity, but is distributed around the fractured ends in mere bands

of well organized fibrous tissue passing from one fragment to the other, so as to bind them loosely together. Sometimes these bands are few and slight, and of an areolar rather than a firm fibrous texture. This is not unfrequently seen in ununited fractures of the neck of the femur, where it is occasionally observed, that a few slender and even thread-like bands, passing from the neck to the broken head, are the only indications of an attempt at the repair of the injury. On the other hand, they are sometimes quite considerable in number and strength, and when they surround entirely the ends of the fragments, and at the same time are short and firm in their texture, they form a tolerably strong bond of union. Now if we suppose the ends of the fragments enlarged by ossific deposit, and their opposed surfaces mutually adapted to one another, and well surrounded by the fibrous bands above mentioned, we approximate to the fourth and last class in our anatomical list, viz.:

4. *The false articulation.*—This is so denominated, because there seems to be, on the part of nature, a purpose to form something like a regular articulation, at the point where she has failed to unite the fractured bone. In very perfect specimens of this condition, we observe, that the ends of the fragments are expanded, somewhat like the expanded articular ends of the long bones; that in a certain degree the opposed bony surfaces correspond with each other, as do the surfaces of a diarthrodial articulation; and that these are surrounded by the fibrous bands, above alluded to, just as the joints are surrounded and held together by their proper ligaments. Still further, it is sometimes seen, that where the opposed bony surfaces play upon one another, they are covered with a layer of condensed fibrous tissue, which represents the articular cartilage, and which is covered in some rare instances with a perfect and complete synovial membrane. We have thus formed something so closely approaching the appearance and structure of a normal joint, as to be capable of performing its functions, in much too great a degree for the comfort of the patient, and to have given origin to the term, which has now become technical, and which is certainly appropriate, viz.: "false articulation." This mode of union is fortunately quite rare, and in fact but few instances are on record of a fully formed synovial membrane existing between the bones, but less perfect specimens, and partial formations of synovial cavities, are probably to be seen in every museum. Here is one taken from a young man, who was treated in this house about three years ago, and you can see the expanded extremities, the adapted surfaces, and here the smooth portion where a distinct synovial sac existed. The "false articulation," I need hardly tell you, is the most intractable of all the forms of ununited fracture. This case resisted all our efforts to cure it, and was finally amputated.

I call your attention now in the second place to the symptoms of this affection, and the effects it produces on the injured limb. Not that the symptoms of ununited fracture are in any way doubtful or obscure, or the diagnosis of the bare fact of non-union, in any case, difficult, but the careful study of the symptoms and appearances presented in each instance, will throw much light on the nature of the case, upon the condition of the affected parts, and probably on the causes which may have led to the failure of union. The symptoms are observed in four classes :

1. *Pain and Inconvenience on Motion.*
2. *Deformity.*
3. *Mobility.*
4. *Uselessness.*

1. Of these the first symptom, viz., *pain on motion*, usually characterizes only the earlier stages of the difficulty, while yet the soft parts. surrounding the fracture, have not become accustomed to the displaced condition of the fragments, and before all inflammatory tenderness has ceased in them. In the later and confirmed stages, when the uniting medium has become organized to the highest point it is to attain, and all further reparative movement has ceased, we usually find the parts singularly insensible to handling, and free from pain on motion.

2. *Deformity.*—From the fact that the ends of the bones have not been placed in apposition, and there retained, there is almost invariably found some degree of displacement, in old cases of united fracture, which gives rise to a greater or less degree of deformity of the limb. This deformity is very constantly associated with shortening, as one of its elements, and is apt to increase as the patient uses the limb, and of course in proportion to the laxity of the uniting medium. Besides these changes in the appearance of the limb, there is generally seen a disposition to be twisted on itself, in some one particular direction, or if it be very imperfectly united, it dangles in the most helpless and unpleasant manner, from the morbid point of motion. Finally, it sometimes happens that no deformity is observable while the limb is at rest, but on the patient making the slightest motion, the action of the muscles brings out an angularity, or a prominence of one fragment, or a shortening which then becomes a marked feature of the case.

3. *Mobility.*—This is a constant symptom and is in fact the characteristic sign and evidence of the disease. It may vary from a mere yielding at the point of fracture, when motion is attempted, up to the dangling, helpless condition above alluded to. In all cases, however, it indicates that the essential function of the bone, viz.: its strength of resistance, is gone, and with it its power to transmit the action of the muscles to their proper points or in their proper directions. This also is a symptom which is apt to increase by use, and sometimes reaches the extraordinary extent you observed in the sailor in this hospital last fall, who had an ununited fracture at the middle of his humerus. He, you remember, could move his arm about in all directions and with the greatest facility, at the false articulation, presenting the most extraordinary flexions and contortions that could be imagined. and yet his arm was so useful to him, that he managed to perform most. if not all. of the active duties of a seaman, and was in the hospital with another disease, and with no intention of seeking relief, from what appeared to us to be so serious an injury of his arm. This, however, is an extraordinary and an exceptional case, for as a general rule, any mobility at the

seat of fracture, and particularly in the lower extremity, leads directly and necessarily to—

4. *The uselessness of the affected limb.*—It is this, after all, which constitutes the important feature and serious character of ununited fracture. A limb thus circumstanced, is incapable of performing its ordinary movements with sufficient strength and precision, to do its duty in locomotion, and this more constantly and more completely in the lower extremities, where the office of the bone, in a large share of its movements, is to sustain the whole weight of the body, than in the upper, where such sustaining power is only rarely called into action. This obvious difference in the effect of non-union in the upper and lower extremities, is strikingly marked, in the advantages gained by the use of mechanical supports and appliances. By the help of these in the arm and forearm, the disabilities of ununited fracture can be so far compensated for, that we have on record many cases of women, for example, who, with ununited fracture of the forearm, have been enabled, by the help of proper supporting bandages and splints, to perform needlework, and indeed to accomplish all their ordinary domestic duties, without any very serious inconvenience, and many other like cases, as of the Arab sheik, who was able, with a similar condition of his right arm, to wield his sword, control his horse, and in fact, perform all the duties of his station by the help of a silver cylindrical splint, with which he supported the weakened member. This compensation in the lower extremity, can only rarely and imperfectly be afforded, and consequently it is in these cases as a class, that surgical assistance is most frequently and most imperatively demanded.

One important consequence of this useless condition of the limb, is its atrophy from habitual disuse. This gradually but surely steals on, and is in direct proportion to the amount of disuse, and to the length of time the disability has existed. The limb emaciates, the muscles waste, the bones become light and porous, and in short, the usual effects of atrophy from disuse, show themselves in every part, and in every tissue of the disabled member. This well known tendency toward impairment, suggests this important practical inference, viz., that any operative interference, which may be deemed necessary, should not be delayed unnecessarily long, until atrophy has weakened the tone of the tissues, and their capacity for repair, and thus, not merely diminished the chance of procuring a union of the fractured bone, but also the prospect of recovery from the effects of the operation itself. Of this atrophy, all the specimens before you give more or less evidence ; but this one, a case of non-union after an operation of excision for a deformity of the bones of the leg, illustrates an extreme degree of the degeneration. The bones have become very small, tapering at their cut ends, where you see they are united by ligaments, very light and porous, so infiltrated with oily matter, that although it is now 18 years since the preparation was made, and it has been repeatedly cleaned in ether, the surface is still covered with the exuded oil.

Having glanced at the anatomy and the symptoms of ununited fracture, I have now to ask your attention to a third division of our subject, embracing the causes of the difficulty under consideration. The careful study of the reasons why a fracture has failed to unite, I regard as of great interest and importance, as throwing valuable light on the nature and condition of each particular case, and on the treatment most appropriate to it, and most likely to be successful in it. In the table that I here present, I have divided the causes of non-union into two great divisions, viz., the constitutional and the local:

1. Constitutional.	I. Diminished power as from	1. Old age.
		2. Disease.
		3. Debility.
		4. Paralysis.
	II. Diverted power as from	5. Pregnancy and lactation.
		6. Other injuries.
2. Local.	III. Obstructed power as from	1. Want of apposition.
		2. Too much motion.
		3. Tight bandaging.
		4. Excessive inflammation.
		5. Rupture of nutrient artery.
		6. Tissues interposed.
		7. Necrosed fragments.

The constitutional causes, as you will see by the table, are divided into two classes, viz.: I. Those depending upon diminished power, and II. Those depending upon diverted power, while the local causes may all be included under, III. Those depending upon obstructed power.

I. Of diminished power we have 1. *Old age* acting sometimes as a cause of non-union. Several writers report cases, in which the diminished reparative power of old age, was the cause of a failure of union after fracture, and it may well be conceived, that where all the actions of the nutritive system are so sluggish and so imperfect, and where all the tissues tend so decidedly to degeneration, the complex processes of repair after fracture, might fail to be elaborated to their highest stages of perfection. But it must be borne in mind, that by a wise provision of Providence, the actual failure of nutrition does not occur in old age, till the end is actually impending; and in the same way, the reparative actions are not allowed to be entirely wanting, while occasion may still occur for their use. Accordingly we find that, in fact, nothing but the extreme of enfeeblement from old age, will prevent, or even materially diminish, the chance of bony union, and that at any period, short of the most advanced senility, we may hope for a cure in ordinary cases of fracture. The same is true of the earliest infancy. I happened to be called last summer, on the same day, to three cases of fracture. One was in a gentleman aged about 50 years; a second. was a child aged six months, and the third was in an old lady of 97. All three did equally well.

2. *Disease* of a general and constitutional character, may well be supposed, in certain cases, to prevent or to retard the union of fractured bones. This has been particularly noticed in scurvy, low fevers, cholera, and some other exhausting diseases. Some forms of secondary syphilis are supposed, by some writers, to exert an unfavorable influence on the

union of fractured bones. Whether this is ever the case, except when the bone itself is in a condition of syphilitic disease, I am not able to state. The testimony and opinions of different authors on this point is conflicting and unsatisfactory.

3. *Debility*, when extreme from any cause, may prevent the proper union of fractures. Many cases are recorded, wherein great debility, either following long continued, wasting disease, or from prolonged starvation, has acted to retard and prevent union, and some of you may remember, a few years ago, that we had a striking exemplification of this fact in a sailor, who broke both his arm and his thigh, while at sea, where for many weeks they were on a short allowance of provisions, and in whom, at the end of, I think, nine weeks, no union whatever had occurred of either fracture. That the failure was from no other cause than the debility induced by starvation, was clearly shown by his fractures rapidly consolidating, as soon as he began to feel the invigorating effects of plenty of good nourishment.

4. *Paralysis* will, beyond a doubt, by destroying the influence of the nerves on the vessels, so far modify the nutritive powers as to lead, in certain instances of fracture, to a failure of bony union. The only case in this house which I can now recall, was that of a poor fellow, who, by the same fall, had received an injury of the lumbar vertebra, producing paraplegia, and a compound fracture of the right leg. No repair of the fractured leg taking place, and the patient's condition deteriorating for a considerable period, amputation was proposed as a means of ridding him of one drain on his vital powers, but was abandoned on account of his unpromising state. He nevertheless, after a long time, began to recover from the paralysis, and as the nervous power of the limbs improved, repair began in the fracture and was gradually, but soundly completed.

II. Of the constitutional causes, depending upon diverted power, we have:

1. *Pregnancy and lactation.*—Here the powers of the system seem, as it were, so preoccupied, that they cannot be drawn out to the repair of the injured bone. Of the occasional existence of this, as a cause of non-union, authors are fully agreed, and I well remember one of my earliest surgical cases was of this class, in a fractured forearm, which refused to unite during pregnancy, and united very well after the birth of the child.

2. *Other extensive injuries*, either in the neighborhood of, or at a distance from the fractured bone, seem sometimes to divert the energies of repair from the fracture, to such an extent as to lead to a failure of union. This cause of non-union, I do not find much spoken of by writers on this subject, but in this hospital, where we have to treat such a multitude of severe injuries, it not unfrequently presents itself. Of this we have a striking example, in the case from which this specimen was taken. It was a young, healthy man, who, by the fall of a heavy boiler, broke his arm about four inches above the elbow, and at the same time lacerated the soft parts of the same forearm so severely, that it was fully a year before all the wounds had healed. During this time,

there seemed to be no good reason why the fracture should not unite. but no union took place, and afterwards none could be made to take place, though he was several times operated on with this view. It was finally amputated, and the preparation shows, as you see, a ligamentous union, not very strong, and a partial imperfect synovial capsule. This other case of imperfect union of the thigh bone, was also complicated with a severe injury of another part, viz. : the elbow joint, and so evident to my mind, was the interference of one of these injuries, with the repair of the other, that I recommended him to lose his arm, to save his thigh. He would not consent at that time, and when he became willing, the golden opportunity had passed by. He died exhausted by the vain attempt at repairing two severe accidents, either one of which, I think, he would have had constitutional vigor enough to have surmounted.

III. We have next to consider the local causes, which, as you see on the table, are all embraced in one division, viz., that of obstructed power. Under this head, we have :

1. Those cases where the obstruction to union arises from *want of proper apposition* between the ends of the broken bone. This is always an unfavorable circumstance, both as regards the strength, and the promptness of the union, and in some aggravated cases, it is undoubtedly the cause of its entire failure. But that by itself, even when existing in a very great degree, it is not always an impediment to complete union, is a matter of every day observation. Here is a specimen, in which, with a double fracture of the thigh, none of the fragments of which are in proper position, a firm union has taken place. This other specimen also. in which the bones have so ridden by each other, that two inches, at least, separate the broken extremities. shows the process of ossific union advancing rapidly. And here perhaps, I should call your attention to the fact, that none of the causes of non-union, either local or constitutional, must be expected, in all cases, to produce an unfortunate result. The truth is, that these causes should be regarded as tending to the obstruction of firm bony union, and as interfering more or less with the completion of the various processes through which this union is elaborated, but not as capable, in any large proportion of cases, of preventing it. Failures of union, therefore, you must understand, even where these causes of failure exist in a very marked degree, are rare and exceptional. The reparative powers are so great and so intelligent in their action, that they are able to triumph over the larger proportion of the obstacles which may be placed in their way, and consequently we have firm bony union taking place in the vast majority of all fractures, in spite of these unfavorable circumstances, which we are now considering, and which only occasionally act as obstructing and preventing causes. Want of apposition, then, may be regarded as in itself an unusual cause of the failure of union, but as occasionally competent to produce that result, and eminently likely to have that effect when combined with,

2. *Too much motion* of the injured limb, during the treatment of the fracture. Reason, as well as instinct, seem to point to the rest of the

broken limb, as the proper condition for its favorable union; and if this rest cannot be secured, either from the circumstances of the patient, or from the necessities of the animal, we expect to see a proportionally unfavorable result. These two last causes, viz.: want of apposition, and undue movement, when taken together, are undoubtedly a not uncommon cause of non-union, but at the same time it is surprising to observe, how great a degree of motion, during all the time of treatment, is compatible with a firm and often with an undeformed union. This is illustrated, not only in the inferior animals, where constraint and rest are difficult to be secured, but often in this hospital, in the case of young children, whom it seems impossible to keep in any reasonable degree quiet, and yet in the end a good cure is obtained.

3. *Tight bandaging* is spoken of by writers on this subject as a cause of non-union, and their unanimity on this point would seem to warrant the belief that it is so. It seems to me, however, that if it ever be so, it must be, from such a recklessness of ordinary surgical precautions, as only needs to be mentioned, to be avoided.

4. *Excessive inflammation* at the seat of fracture. During the first few days after a bone has been broken, inflammation of all the injured tissues arises, as a direct result of the violence which they have suffered, and during the existence of this inflammation, no reparative exudation is poured out. It is only after this common inflammation has passed away, that the actions of proper repair commence. Now if from any cause, as from severe contusions, from detached fragments, or from rough usage in transportation, this inflammation should be more than usually severe, the time for the commencement of repair, will be proportionally delayed, and there is always a certain degree of danger, that the inflammatory actions may go too far, and may pass the stage at which resolution is possible, into the stage of suppuration. This unfortunate circumstance has happened to us in several instances in the last few years, and entails many severe and important consequences, one of which has been a more or less complete interference with the disposition to union. Even in those cases, where inflammation does not reach so high a point as to produce suppuration, its long continuance, by postponing the commencement of the reparative action, seems so to thwart nature's intentions, as sometimes to put her altogether aside from her original purpose of repair.

5. *Rupture of nutrient artery.*—The principal vascular supply of the central substance of the long bones, is derived from the nutrient artery, which in the femur, and in the bones of the forearm, enters the bone, in a direction from below upwards, and in the humerus and tibia, from above downwards. Now it is easy to conceive, that if a humerus or a tibia is fractured above the point of entrance of this artery, or a femur or ulna, below the same point, that in the first case the upper, and in the second case the lower, fragment will necessarily be cut off from the direct vascular supply. This has been supposed to exert some influence in determining the non-union of the fracture, and M. Gueretin has collected a table of thirty-five cases, which gives some statistical support to this idea. Dr. Norris of Philadelphia, however, has brought

together forty-one cases, and examined them in the same point of view, and as his results do not at all correspond with those of M. Gueretin, the question would seem to be not definitely settled.

6. *Tissues interposed* between the broken fragments, may act in one of two ways to defeat bony union. 1. By keeping the broken ends widely separated. 2. By shutting them off from bony contact. This latter seems to me the most effective agency of the two, as from analogy, contact of the fragments seems to be essential in determining bony union, and even if action should begin and bony matter should be thrown out, yet the interposition of a layer of muscle or of tendinous expansion will, it seems to me, necessarily tend to prevent its consolidation. In our own experience, we have found this to be a common cause of non-union, though so high an authority as Dr. Norris doubts whether in itself it can ever be so considered. I show you here a specimen of a broken femur, taken from a patient in this house, where we found the combined tendons of the extensor muscles interposed between the fragments, and preventing their union, and you observe in these fragments, that no action whatsoever has taken place, except a very considerable degree of atrophy. The same thing existed in a patient of Dr. Watson's, a young girl upon whom he operated a few years ago, for an ununited fracture of the arm, and I expect presently to demonstrate to you the same condition of things, in the patient upon whom we are proposing to operate this morning.

7. *Fragments of bone and foreign bodies* when lying between the fractured extremities, will often prevent or obstruct the process of union, by exciting and keeping up excessive suppuration. Of course when I speak of fragments of bone acting in this manner, I refer only to such fragments as are so completely detached as to lose their vitality, which then play the part of a sequestrum, or of any other foreign body. This occurs most frequently, in compound, but sometimes in simple fractures, and is perhaps more often a cause of imperfect or delayed union, than of non-union, as nature often seems to provide against the difficulty, by throwing out a superabundance of reparative matter, which incloses the broken ends, foreign body and all, in one strong casing, which becomes finally a firm bond of union, and particularly so if after a time, the foreign body, as is often the case, is got rid of. This is well exemplified in this specimen, where this small dead fragment is seen to have prevented direct union, and when the material of repair has been thrown out in a bridge form over and around it. You see also that in this case, the union is not firm, from deficiency of material. Here is another beautiful specimen, in which this large necrosed fragment of the femur, almost altogether prevented the actions of repair.

I regard this minute and careful study of the causes of non-union of fracture as exceedingly necessary and useful, in giving us correct and precise ideas, not only as to the nature of each particular case, but also as to the most appropriate method of treatment, to which subject I must now ask your attention.

A large number of the cases in which, after the lapse of six weeks or two months, no union has occurred, are, as I before intimated, merely examples of delayed action, and only require additional time for the completion of the process. This delay may occupy several months, and a final good result be obtained; and it is, therefore, imperative that every case that we cannot clearly make out some local impediment, should have the advantage of this additional time. Setting aside these cases, we now confine ourselves to the consideration of those which, after a liberal allowance for delay, still refuse to unite. Without attempting to be too minute, we may range the principal methods of treatment which have been employed with success, under eight heads.

Medical.	**1. Friction and Pressure.**	Surgical.	5. Drilling.
	2. Counter-irritation.		6. Seton.
	3. Electricity.		7. Resection.
	4. Salivation.		8. Amputation.

1. One of the earliest and simplest methods of which we have any account, and perhaps the first to be employed, is the *friction of the broken ends* upon one another, so as to excite some degree of pain and soreness about the fracture. This procedure, repeated until considerable action is excited, and then combined with moderately firm pressure of splints, and a longer time allowed, will undoubtedly be sufficient, in certain cases, to secure a good result. It is principally applicable to cases in which the local impediments to union are not serious, and when the powers of repair merely require to be roused into action.

2. *The application of blisters or other counter-irritants* to the integuments, in the immediate neighborhood of the injury, seems sometimes to act as a stimulant to the sluggish actions, and to provoke the throwing out of the reparative material. This method, though approved by many authors, has not, as far as I know, been used to any extent in our hospital.

3. *Electricity* passed through the limb, either in the form of shocks, or of a continuous electro-magnetic current, would very naturally suggest itself as a means of exciting deep action in an ununited fracture. We have employed it in this house very extensively, occasionally in connection with acupuncture, and we have generally been disposed to attribute some efficacy to it, in cases where union was long delayed; but of its successful employment in an old case, I have no experience.

4. *Salivation* has been thought by some to produce such a change in the condition of the ends of the bones, in an old ununited fracture, as to render them more disposed towards union, and some successful cases are reported by reliable observers. I do not think it has ever been employed in this house, to a sufficient extent to test its value, and authorities are by no means unanimous in recommending it.

These four methods embrace, what may be called, the medical treatment of ununited fracture. They aim to excite actions which shall be favorable to union, by remedies not directly applied to the faulty part. The remaining four on the table, embrace the more strictly surgical methods of treatment, and they depend for their efficacy on operations changing the condition of the ends of the bones, of these we have:

1. *Drilling* the broken extremities, in such a manner as to wound, as far as may be, the opposed surfaces, and thereby to reproduce in a

certain degree, the condition of recent fracture. As we now perform it, it was first suggested by Dr. Brainard of Chicago. The operation consists in making, first, a minute puncture through the skin, near the seat of fracture, and then introducing such a drill as this I show you, which is nothing more, in fact, than a long carpenter's drill, and with it boring in various directions, wounding as far as possible the surfaces of bone which are in contact with each other, and traversing the ends of the fragments, as often as may seem necessary, to excite some action in their bony tissue. This operation may be repeated every eight or ten days according to the effects produced, or until union is found to be commencing, the parts being kept in the meantime in good apposition and at rest. The principle of this operation is, by the wounding of the broken extremities of the bone, to excite, by that means, anew, the disposition in the parts to throw out reparative material. It is supposed that when, in any case of fracture, the reparative nisus has failed of its effect, the disposition to repair ceases, in a great degree, and even if the obstructing cause be removed, the parts will remain quiescent, until the reparative effort is, in some way, again aroused. This is in fact the principle upon which are founded all the surgical procedures, which have gained any repute, in the management of these cases. This operation by drilling is a simple, easy application of this principle, and its subcutaneous character, while it does not impair its efficiency, renders it less liable to produce evil consequences. In its present form, it is too recent to be precisely appreciated as to its result, but it has been sufficiently tried to show, that in a certain number of cases, it will suffice for a cure. We have employed it in a number of cases, in this hospital, and in some of them, with a very satisfactory success. It has the great merit of being comparatively safe, and in a certain class of cases, not the worst, is a very valuable surgical resource.

2. *The seton.*—This mode of treatment consists in passing a seton of silk, or india-rubber, between the ends of the bones, and leaving it there, until sufficient action has been excited, to produce the exudation of bony matter. The limb is placed in proper supporting apparatus, and time given for consolidation to ensue. This treatment originated with Dr. Physick of Philadelphia, though probably first suggested by Winslow, in 1787. There are several modes of applying this principle of the seton. Dr. Physick originally left the seton in its place for several months, or until union became firm. Others have removed it before it had done more than excite common inflammation along its course, trusting to this excitement to terminate in bony exudation. Some have passed the seton near, instead of between the bones ; others have used a wire, passed round the false joint, and others again wires, passed between the bones. All these act on the same principle, viz.: the exciting of specific bony action, by the previous production of common inflammation. This plan of treatment has now been in use so long, and so extensively as to be fully established as a valuable, and in appropriate cases a successful operation ; but, it is a striking instance of national prejudice, that scarcely one of the great names of England, France, or Germany, is willing to accord to it anything more than an equivocal position, as a remedial resource in ununited fracture.

3. *Resection.*—This operation consists in exposing the false joint by an incision, and removing the ends of the fragments, so as to present fresh-cut surfaces in the wound. The bones thus freshened, are either kept in place by splints and bandages, or they are fastened together by silver wire, which secures their more certain and accurate contact. This is a most powerful means of exciting action in obstinate cases, but it has the serious disadvantage of severity and danger. The injury is necessarily converted from a simple, into a compound fracture, and this circumstance alone, particularly in the larger bones, is sufficient to account for the fact, that the operation is not unfrequently fatal. It is, therefore, only to be regarded as the last resource of surgery, and not, even as such, to be lightly resorted to.

4. *Amputation* of the disabled limb. This cannot be classed as one of the means of cure, in pseudarthrosis, yet it must be included in this category, as one of the things which is sometimes required to be done. It can only be properly regarded, as a means of ridding the patient of what cannot be cured, and is in no case more strongly felt to be the opprobrium chirurgorum.

I regret that the time will not allow me to be more full and complete, in this outline sketch of this interesting subject. I am obliged to touch each topic lightly, and omit many whose importance entitles them to consideration. The whole matter will well repay your further study, and for those of you who desire to follow it up more fully, I know of no article which embraces, in a short compass, more valuable information on this subject, than a paper by Dr. Norris, of Philadelphia, in the *American Journal of the Medical Sciences*, vol. xxix., for the year 1842. The articles in the *Cyclopedia of Practical Surgery*, on "Fracture," also embrace much valuable information on the subjects we have been considering.

The case we present you to-day, is one in which we propose to perform resection, and we choose this operation for reasons which, you will presently see, exclude all others. The patient is a feeble, delicate woman, who, about 12 weeks ago, received a simple fracture of the lower end of the femur. She was treated by an excellent surgeon in the country, in the straight apparatus, but no union occurring at the end of six weeks, the starch bandage was applied, and she was sent to me in the city, on the 15th of October last. By this time, unfortunately, a large bed-sore had formed, and what was worse, the upper fragment had worn through the integument, and was presenting on the front part of the thigh. These two complications have absorbed our attention since her admission, and we have been trying to keep the protruding bone from doing any further mischief, while we have been securing the improvement of the bed-sore. By means of the water bed, and by the help of the various contrivances you have seen, to keep off, or to diminish the effect of pressure, this formidable bed-sore has assumed a clean and healthy appearance; but in the meantime, the protruding fragment has gradually worn its way clean through the skin, and is provoking a suppuration which is daily increasing. You perceive that the fracture is about four inches above the knee joint, and that the end of the upper fragment is so bevelled off from behind forwards, as to be as sharp as a chisel on its anterior edge, and it is this sharp, chisel-like edge, which, in the original injury, cut its way through the anterior mass of the femoral muscles, and lodged, in the first instance, just under the skin, through which it has since made this perforation. You can easily see, from this diagram, how when such a perforation as this, of the muscles surrounding a fracture, takes place, and when the fragment is so far thrust through them as to be felt just under the skin, that there must necessarily be a plane of muscular tissue lying between the ends of the upper and lower fragments, keeping them apart, and preventing the possibility of their coming in contact. This, as I have told you, is not an infrequent condition, in fractures of the lower end of the femur, and if not removed immediately on the occurrence of the injury, by powerful extension of the limb, and such other manipulation as will disengage the upper fragment from its lodgment in the muscle, it remains as a most effectual preventive of union, and in our experience is, perhaps, the most common anatomical condition, in the cases which, at the lower end of the femur, refuse to unite. It is evident, however, that it is only in the thigh and the arm, that it could be expected to occur, as it is only in these situations that the bone is entirely surrounded by muscles. In this condition, of a thick layer of muscle interposed between the fragments, you can easily appreciate, that none of the usual means of exciting action in ununited fractures, can be of the least avail. Pressure, electricity, salivation, even drilling, or the seton, cannot bring about union, in parts which are not in contact with each other, and nothing evidently can be done effectively, until, by the removal of the interposed substance, the bones can be brought actually into contact. Now this removal, it is usually absolutely impossible to effect, by extension and manipulation, at any time after the first receipt of the injury, and this by reason of the adhesions which soon take place of the parts around the fractured extremities. The only resource we have, therefore, is resection, whereby the protruding end being cut off, and dissected from the perforated muscle, can be brought again into contact with the lower fragment, which in this case lies behind it.

For these reasons, as I said above, we have at once decided on exsection, or resection, as it has become fashionable to call it, and we have less hesitation in performing this serious operation, as by the protrusion of the bone, the injury has already assumed the severity and dangers of a compound fracture. And here, I must beg you to notice, that we have not the usual privilege of waiting till the patient's condition shall be most favorable for operation ; for while the bed-sore is improving, the condition of the parts at the fracture, is growing worse, and suppuration is extending. If anything is to be done, therefore, we are obliged to seize the present moment for doing it, and it must be acknowledged that with all the complications of the case, it is exceedingly unpromising. I operate solely because, if left as she is, she must die from the progress of the local mischief, which progress, the operation affords the only chance of arresting.

(The operation being performed, verified the diagnosis of the upper fragment being thrust through the extensor muscles, in such a manner, as to interpose a thick layer of muscular and tendinous tissue between the broken ends, and it was found necessary to dissect the bone from the surrounding tissues, so strong were the adhesions it had contracted, and in the same manner to separate the lower fragment before they could be brought in contact. The upper fragment was then sawed off about one inch, and the lower was gnawed off with the rongeur. They were then brought together, and came well into apposition, while the limb assumed so satisfactory a position, that no silver wire was used to confine the opposed ends, as was at first intended. For a time, everything went on favorably, but it was soon found, that the irritation and discharge from an enormous bed-sore, which soon again increased in size, together with the suppuration from the wound, were too much for her powers, already much taxed and exhausted by long continued confinement and suffering. She sank gradually, and died about three weeks after the operation. No apparent attempt at union had taken place.)

April 5, 1859.

ART. VII.—*Report of the Proceedings of the Medical Societies and of the Practice of the Hospitals in New York; prepared for the* NEW YORK JOURNAL OF MEDICINE, by GEORGE F. SHRADY, M.D., Resident Surgeon to the New York Hospital.

NEW YORK HOSPITAL.

IN the last number I referred to the treatment of fractured thighs by the N. Y. Hospital splint. I cannot however complete all I have to say upon that subject without alluding to Burge's apparatus. This splint is rapidly gaining favor in the profession, and, as far as my observation in the treatment of the cases in this institution is concerned, I think that there are no advantages claimed for it by the inventors, which it does not possess. I shall not enter into any description of the apparatus, nor discuss the various advantages claimed for it; they have been fully set forth in a paper in a previous number of the Journal. We have treated six cases by this new apparatus, and thus far no shortening nor deformity has resulted. The great advantage that it possesses in my opinion is *comfort* to the patient, by which means he is enabled to bear confinement, better than in the ordinary straight splint. This certainly is a point which should not be lost sight of in the treatment of these fractures in tuberculous patients.

The new point of counter-extension is also deserving of note. Taking everything into consideration, I think the apparatus is unsurpassed. It seems susceptible of very little if any improvement. The surgeons of the hospital all seem to think well of it.

The treatment of fractures of the leg is not peculiar. We first place the limb in the bran-splint or fracture-box until all the swelling has subsided, next the side splints are applied. These are two in number, and are shaped like a boot, made of thin wood, and nicely padded.

The limb is first bandaged from the toe as far as the knee, the splints applied on either side and secured; pieces of blanket being stuffed in the spaces left between the splints and limb, in order to equally distribute pressure. When the union is sufficiently firm to allow it, the starch bandage is applied, and the patient is enabled to get about the ward by means of crutches. The compound fractures are treated almost altogether by this bran-splint.

Since the last appearance of this report, Drs. Halsted and Watson have been the attending surgeons. The following operations have been performed by them during the past month: Ligation of the Femoral; and perineal section by Dr. Halsted. Three amputations of the leg; and puncture of the knee joint for sub-acute synovitis, by Dr. Watson.

Dr. Halsted performed the operation of perineal section for stricture of the urethra, upon a patient aged 35, with the following history:

Sixteen years ago he contracted gonorrhœa, which was followed at the end of eight years by an organic stricture. This stricture was treated in the ordinary way, by dilatation, and was progressing favorably until six months previous to his admission, when he suffered from a renewed attack of inflammation, which caused complete retention. He applied to a physician, who relieved him; at the same time made for him a false passage. Since that time he has passed his water with a great deal of difficulty and pain. At the time of his admission there was an induration in the perineum about the size of a goose egg, which he said had existed since the instrument had been introduced. After employing local depletents for a time, until the tenderness which had existed over the tumor had subsided, an attempt was made to dilate the stricture by conical bougies. This treatment was persevered in for a considerable length of time, but the induration of the perineum was so extensive that it was finally decided that he could only be relieved by an operation. A small bougie was first passed through the stricture, an incision about three inches in length was made in the median line; coming upon the stricture, it was divided, and a female catheter was passed into the bladder. On attempting to pass a male catheter through the urethra into the bladder, the instrument was arrested at a point about two inches from the meatus, where a second stricture was found to exist. The incision in the perineum was then prolonged upwards, in order to divide this constriction; when this was effected about three inches of the urethra was laid open. A No. 10 catheter was introduced and allowed to remain for three days, at the end of that time it was removed, and passed only at such times when the patient wished to urinate. It is now about six weeks since the operation, and the wound in the perineum has almost closed up, and a No. 10 silver catheter can still be passed, though with considerable difficulty. He can pass but a very small amount of water without the instrument. This case is interesting on account of the extent of division of the urethra, followed by such an apparent good result; though it is feared, notwithstanding, that the canal will be finally strictured.

The ligature of the femoral for popliteal aneurism was performed also by Dr. Halsted. The patient first noticed a swelling, about the size of a hen's egg, in the left popliteal region, ten days before admission. This tumor gradually increased, so that at the time of admission it was nearly as large as a fœtal head—causing the limb to measure in that situation, over the patella, two inches more in circumference than its fellow. The pulsation was perfectly distinct, and could be arrested for a time by pressure upon the artery above; in fact, the case presented all the ordinary symptoms of aneurism in that locality.

The artery was exposed in the usual way and ligated; immediately on tightening the ligature, the bruit and pulsation ceased. The aneurismal tumor became solid, and the wound healed kindly, the ligature coming away at the end of the 19th day. The circumference over the popliteal region is now an inch less than previous to the operation, and the tumor is about the size of a hen's egg.

Dr. Watson lately performed an operation upon the knee joint that is of a good deal of interest in a practical point of view. I refer to puncturing the knee joint for sub-acute synovitis. The patient is a young man, 21 years of age, though of strumous habits, has generally enjoyed good health up to two years ago, when he first began to be troubled with pain in the right knee, which was followed by a considerable amount of swelling in the part. This swelling has gradually and slowly increased, until the time of admission, when the knee of the affected limb measures in circumference two inches more than its fellow—fluctuation distinct, and the patella is elevated. This distension extended a hand's breadth above the upper margin of the patella, on the anterior aspect of the thigh. Patient suffered no considerable amount of pain, except by pressure over either condyle, particularly the inner. Patient's general health was undisturbed.

The ordinary remedies were tried, but seemed to be attended with no relief, and about two weeks after his admission it was deemed best to puncture the joint and let out the fluid. This was accordingly done by Dr. W. The puncture was made about one inch above the inner condyle, with a curved, sharp-pointed bistoury. About two ounces of rather thick, serous fluid, and a slight amount of apparently puriform matter flowed out. The opening was dressed with adhesive straps, and water dressings were kept constantly applied. It is now about a week after the operation; the adhesive plaster has been removed, and union is found to have taken place by first intention. A small quantity of fluid has collected since the operation; the patient is otherwise doing finely.

The Dr. intends soon to make another puncture, and inject into the cavity of the joint a solution of the perchloride of mercury, following out the practice of the late Dr. Hubbard, of New Haven. The idea is to change the pyogenic character of the secreting surface.

Of the three amputations of the leg by Dr. W., one was for consecutive hemorrhage in a compound fracture, in which the anterior tibial artery was eroded by the edge of one of the fragments. The other two were for severe compound comminuted fracture. Alanson's method was resorted to.

Dr. Parker, who is now on duty, a few days ago performed amputation of the thigh of a patient 21 years of age. The history of the case is as follows: About ten days previous to admission, while at sea, he sustained a fracture of the right thigh, low down, which, according to his account, was attended with a good deal of ecchymosis. There being no surgeon to the ship, the limb was put up after a fashion by the mate. Two short side splints were applied with a tight bandage. On admission into the hospital, the limb was very much swollen, and the pressure of the internal splint had caused a superficial slough over the inner condyle. On examination at the time, it was supposed that the femur had been fractured just above the condyle, and that the condyles had also been split. He complained of a good deal of tenderness around the knee-joint, which seemed to be the seat of inflammation. Local depletion was resorted to with the limb on the double inclined plane. The thigh still continued very much swollen, and the superficial slough over the internal condyle separated. The opening thus made was found to communicate with the joint, synovia flowing from it. The whole thigh was found to be a bag of fluid, nearly as high up as the trochanter; filled with decomposed blood and purulent matter, which by pressure would find its way through the opening alluded to. A counter opening was made on the upper part of the thigh, but this seemed to do but little good. The patient's system being very much lowered by this condition of things, it was agreed that the best thing that could be done, would be to amputate—and leaving everything open, allow free exit to matter. This was accordingly done by Dr. Parker, through the middle of the thigh, by Alanson's method. The patient is now doing pretty well, but is not yet out of danger. The limb was examined after the operation, and the femur was found to be fractured obliquely, immediately above the condyle; the lower portion of the upper fragment riding over the external condyle, lacerated the synovial membrane at that point. The condyles were partially split through. The whole tissues of the thigh were infiltrated with grumous fluid, forming an immense abscess.

LONG ISLAND COLLEGE HOSPITAL, BROOKLYN.

Report of Cases by John G. Johnson, M.D., Adjunct Surgeon to the Hospital.

Case 1.—*Fistulous opening of the small intestines through the umbilicus, the result of injury.* (Service of Drs. Daniel Ayres and J. G. Johnson.) John Ratchford, an Irish lad ten years of age, living at 40 Raymond street, was brought to the hospital with the following history: He had enjoyed perfect health up to December, 1857, when, at the burning of the public school-house, in Navy street, he jumped from the second story window, striking his abdomen on the frozen ground. About two weeks afterwards he had constant pain in the abdomen and frequent movements of the bowels, which were always in the form of a diarrhœa. In the latter part of January the abdomen became swollen and painful, with constipation requiring the use of enema and ol. ricini to effect a movement of the bowels. About the middle of August a well-defined tumor made its appearance suddenly in the umbilical region, preceded by vomiting, purging and abdominal pain.

This tumor surrounded the umbilicus, extending on either side to the linea semilunaris. On percussion it was resonant, hard and slightly tender to the touch, and red around the umbilicus. The boy was emaciated, had fever at night and great thirst. A week later, while under manual examination, pus was seen discharging from the umbilicus. A half pint of pus continued to discharge a day.

November 1st, he was again brought to the hospital. There is general emaciation—much more than when last seen—pallor, a pinched appearance of the countenance, coldness and blueness of the extremeties, very little appetite, sleeps badly, is restless and tosses about; great thirst, with but small scybalous passages per anum. The tumor has disappeared from the abdomen, a fistulous opening exists at the umbilicus, around which the integuments are excoriated and raw. Through this fistulous opening there is a constant discharge of a light yellowish, semi-fluid character, with very slight fecal odor and containing nearly all the food taken in a partially digested condition and particles of undigested food. The opening is probably into the small intestine, but a short distance below the ductus communis choledochus judging from the character and slight odor of the discharge. The mother states that several quarts are discharged daily through the fistula, and it is evident that but very little finds its way into the circulation. The mother was advised to have the patient admitted into the hospital, he previously having been an out-door patient.

The treatment designed was to enlarge slightly the external orifice, and by careful exploration passing one point of Dupuytren's forceps above, and another below the septum which existed in the bowel, gradually destroy it, and thus reëstablish the natural course of the intestine, and afterwards by a plastic operation close the external opening.

It is greatly to be regretted that the patient was not admitted to the hospital, as it was proposed to establish some experiments on digestion, similar to those interesting ones of Professor Bush, which Dr. Bauer has recently presented to the profession.

His mother declined having him admitted to the hospital, and he was directed to wear a compress over the fistula to retain the contents of the bowel. He was directed to use beef tea and other kinds of food easily digested by the stomach, together with enema of the same. The treatment, however, was but imperfectly carried out, and the child died of inanition in the latter part of December, 1858, one year from the receipt of the injury. An autopsy was desired, but refused.

Case 2.—Stricture of urethra—Perineal section. (Service of Drs. Daniel Ayres and J. G. Johnson.)—Charles Webster, a native of Denmark, a sailor thirty-eight years of age, on the 25th of December, 1857, while on board the ship "Aurora," received a violent blow on the perineum from a piece of grating.

They had encountered a severe storm, and shipping a heavy sea, the piece of heavy grating was thrown against the perineum, crushing the urethra so that the surgeon of the ship states that he had great difficulty in drawing his water. He was incapacitated from work and the surgeon continued to draw his urine during the remainder of the voyage, using a medium sized silver catheter. He was advised to place himself under hospital treatment immediately on landing, which he neglected to do, till about the 1st of February, 1858, when he was admitted to the New York Hospital, under the care of Dr. John Watson, for retention of urine.

The patient states that Dr. W. tried various sized instruments, but was unable to introduce the smallest flexible bougie. Potassa fusa was introduced in a bougie and allowed to remain for fifteen minutes in contact with the stricture; three days afterwards careful dilatation was commenced and gradually continued till a full sized instrument could be introduced. The introduction of the bougie was now discontinued, and in two months the stricture was so firmly contracted as to render the introduction of any instrument impossible. The surgeons of that institution desired to operate upon the stricture, which the patient declined to submit to, and he left the hospital. He was admitted to the Long Island College Hospital, August 3d, 1858.

Condition on admission.—It was impossible to introduce the smallest sized bougie. The urine was forced away drop by drop, with great trouble. The patient employing almost his whole time in his endeavors to evacuate his bladder. There was a strong ammoniacal smell to the urine, and the bladder was at no time emptied. The corpus spongiosum anterior to the scrotum, the scrotum itself, and also the perineum were much distended, dense and inflamed, showing a deeply seated abscess forming anterior to the stricture. The stricture was immediately in front of the bulbous portion of the urethra. Examination per rectum showed the prostate much enlarged and very tender. The neck of the bladder was also dilated. The abscess was immediately opened and warm fomentations applied which quickly relieved the pain. The stricture was carefully tried from day to day, till the ninth day after the admission, when a No. 1 grooved staff was introduced into the bladder. The induration of the abscess having subsided it was determined at once to divide the stricture. The stricture was found cartilaginous for full three-fourths of an inch of the urethra which was freely divided. A director was then passed through the wound into the urethra, posterior to the stricture, and a No. 9 catheter passed down to the stricture and pressing upon the director as a guide, entered the bladder. Upon the introduction of the catheter the patient was enabled to pass his water freely. The catheter was allowed to remain till the fourth day, when it was changed for No. 11. The wound healed kindly and there were no circumstances worthy of note afterwards; the patient was discharged cured on the 5th of September, 1858.

Case 3.—*Extensive fæcal abscess, result of inflammation following a punctured, lacerated and penetrating wound by the side of the rectum.* (Service of Drs. Daniel Ayers and J. G. Johnson.)—Thomas Anderson, 40 years of age, a machinist by occupation, was admitted to the L. I. College Hospital, on the 30th of August, having been brought in a carriage and walking into the house with the greatest pain and difficulty, in a stooped posture, supported by his attendants. He was exceedingly emaciated, with frequent pulse, entire loss of appetite and symptoms of hectic. Not having slept soundly for several weeks, his nervous system was completely exhausted. The following history of the case was elicited. About four weeks previously, while engaged at work in riveting boiler plates in a stooping position, he was in the act of sitting down upon a stool which was behind him, where one of his fellow-workmen, by way of a joke, placed an oil feeder such as is used for oiling machinery, having a long and pointed nozzle. The nozzle of this feeder was five inches long, blunt pointed, about one-half inch in diameter as its base. The nozzle of the feeder penetrated his clothing and entered the pelvis between the rectum and its bony walls to its full length. Violent inflammation quickly followed the injury, attended with intense pain and severe constitutional symptoms, confining him to bed; all motion of the parts involved being followed by an aggravation of his sufferings, defecation and micturition caused intense agony; extensive suppuration quickly followed. The matter burrowed in every direction in the loose cellular tissue, dissecting the rectum from its natural connections infiltrating the perineum as far forward as the scrotum, and laterally to the tuber ischii, ultimately finding vent into the rectum above, and upon the perineum in several places, from which masses of disorganized cellular tissue were floated out with enormous quantities of fetid pus. This continued to be secreted in such quantities that at one dressing more than a half pint was discharged. The effects of such a drain was soon manifest in an exhausted and debilitated constitution, fully accounting for his condition on admission.

Treatment.—A long bistoury was passed through the wound in the perineum and brought out into the rectum through the opening already made in that organ by ulceration, which was about three inches above the anus. The whole mass included in this space was freely incised, after which all the fistulous sinuses were divided throughout their whole extent, thus giving free vent to the intestinal discharges and to all secretions.

The hemorrhage was free but was suppressed by filling the wounds with sponge, which was allowed to remain till the next day, when it was removed and its place supplied by lint, soaked with Labarraque's solution. The wounds were filled from the bottom with this dressing which was retained in its place by a T bandage. The patient was ordered ten drops of the muriated tincture of iron three times a day in an infusion of bark, a liberal allowance of ale, and as good food as he could take. His relief from suffering was immediate, and all his bad symptoms rapidly disappeared. The wound was touched from time to time with a solution of nitrate of silver and granulated rapidly, so that he was discharged well on the 3d of September.

Case 4.—Popliteal aneurism, cured by seventy-two hours' compression. (Service of DRS. BAUER and WHALEY.)—James Ferry, twenty-four years of age, a bar-tender of dissipated habits, was admitted to the Long Island College Hospital, September 28th, with the following history: Seven weeks prior to his admission he noticed that his right limb commenced swelling, for which, as it did not subside, he applied for admission to the hospital.

Condition on admission.—Pulse ninety-six, rather feeble, heart sounds normal, appetite indifferent, three or four alvine evacuations daily. Has had gonorrhœa, but not syphilis. The swelling of the right limb commences about six inches above the knee joint and extends to the toes; apparently a serous infiltration into the cellular tissue. The temperature of the limb is slightly elevated when compared with the rest of the body. In the popliteal space there is a circumscribed pulsating tumor upon which the skin slides. An aneurismal bruit is distinctly heard and the pulsation of the tumor ceases upon compression of the femoral artery. There is tremor of the muscles and the prodroma of delirium tremens which soon supervened; in connection with the delirium tremens he had an attack of dysentery, which placed him in a precarious condition. He recovered from both of these, and on the 15th of October it was deemed advisable to commence the treatment of the aneurism. He had previously been put upon the dilute mineral acids and iron to improve the condition of his blood, as he was extremely hydraemic. Ligaturing the femoral artery was deemed out of the question on account of the bad state of his constitution, and the following method of compression was devised by Dr. Bauer. An india-rubber air hand-ball was placed in Scarpa's space over the femoral artery, and held in its place by the tourniqnet; previous to applying it the limb had been strapped from the toes to the knee. The œdema continuing in the leg, a padded sheet iron splint was placed under the leg and held in its place by a bandage.

After the application of the tourniquet the leg was elevated. As he complained of no pain the ball was kept in its place for seventy-two hours. On its removal it was found that a slough of the integuments had taken place under the ball. The limb had diminished greatly in size, and pulsation was still distinctly felt in the aneurism, but feebly, and the tumor was harder. The dressings were removed and the limb simply bandaged from the foot upwards. The ulcer was regularly dressed and patient kept on dilute nitric acid and the muriated tincture of iron, five drops of of each three times a day, with best house diet. On examination of the aneurism one week later, it was found that the pulsations had entirely ceased, and also that no pulsation could be detected in the femoral artery below the point where pressure had been applied. The leg was greatly diminished in size, the tumor still soft and compressible, and two arteries, one on either side of the patella could be easily felt pulsating. A soft pad was now placed over the aneurism and a bandage neatly applied over the whole limb from the toes to the groin, and absolute rest enjoined until November 9th, when a starch bandage was applied, and the patient discharged cured. He has been seen within a few days and the cure was found to have been permanent.

Fœtal malformation.—The following interesting case was presented for demonstration at the theatre of the Long Island College Hospital and kindly added to the anatomical museum of the institution, by Dr. Arnold Hallet, who has also furnished the following history:

Mrs. S. was delivered in November, 1858, of a female child at her fifth pregnancy. The previous children at birth were sound and perfectly healthy. This last took place at the eighth month of gestation. The cyst in which the brain was inclosed was ruptured during labor, and consequently the latter had escaped. The most interesting feature of the case consisted in the position of the heart, which was completely external to the thorax, and could be felt to pulsate between the fingers. The stomach, intestines, liver and spleen were also protruded from the body in consequence of the absence of their abdominal coverings. The only evidence of life was in the heart, which continued to pulsate for an hour and a half after birth. At first its action was very strong, but gradually became more and more feeble until finally it ceased. There was no effort at inspiration.

On removing the pericardium, that the action of the heart might be seen more distinctly, it was noticed that the right auricle was the last to cease its efforts, thus confirming the generally received opinion that this part is the last to cease its contractions at death.

The placenta was almost immediately in contact with the fœtus, the cord being not more than one inch and a half in length.

A case somewhat analogous to this was also presented to the College Museum, by Dr. Daniel Ayres, in which the growth of the left leg and thigh has been arrested, and in which the mesentery is attached along its whole length from its junction with the trunk to the heel.

All the abdominal organs are exposed to view; the abdominal walls being entirely absent. It was likewise anencephalous.

NEW YORK PATHOLOGICAL SOCIETY.

Regular Meeting Dec. 22, 1858, Dr. Peaslee, President.

(*Reported for the* N. Y. Journal of Medicine *by Geo. F. Shrady, M.D.*)

Sub-luxation of the knee-joint from ulceration of the ligaments.—Dr. Jas. R. Wood presented a specimen taken from a patient who had been an inmate of the Bellevue Hospital, since April last.

She was about thirty years of age, and entered the hospital with chronic disease of the knee-joint. She had suffered about a year from synovitis, and when examined after her admission into the hospital, it was discovered that she had tubercles, and shortly before her death it was also discovered that she had Bright's disease. She was treated for synovitis in the usual way, by counter-irritation, drains in the neighborhood of the joint, and position on the double inclined plane. About a month before she died, it was discovered that there was displacement at the knee-joint, that the left condyle had lost its position, and occupied the position of the right; in other words, sub-luxation of the joint had taken place, outwards and backwards.

The outside of the condyle, it will be seen, said he, is bare of the periosteum, and the bare bone had by attrition so diseased the ligament, that it had given way This seems to be the only way that the luxation could be accounted for. We know that occasionally there is subluxation from injury, as described by Mr. Cooper, where the ligament gives way and the patient falls at once, and is unable to get in position afterwards. He refers to a case, where a lady, in attempting to get into a coach, turned her leg, the ligament gave way, she fell immediately to the ground, and was unable to raise herself in the erect position.

This specimen belongs to an interesting case, inasmuch as we find from the ulcerative process that the ligament is destroyed, and luxation is produced. It is rare to see luxation of the knee-joint from any cause, especially from ulcerative disease of the bone, affecting secondarily, the ligament. We know in the hip-joint, it is comparatively rare. Professor Marsh, of Albany, who made a very thorough investigation of this subject, some time ago, and visited hundreds of museums, both public and private, stated that he had never seen a case of luxation from ulcerative absorption of the hip-joint. We know now, however, that it does occur; that he was mistaken, though the disease is very rare. There are some specimens in this museum, and others in private collections, that demonstrate this fact. I have two in my own museum. He brought this specimen because he thought it was a rare one, and was interesting to those gentlemen who do surgery.

Dr. Sayre stated that he had, within the last four years, in synovitis of the knee-joint, kept the limb in the straight position, and was perfectly satisfied of its utility. He asked if it was possible, in that position, that such a dislocation would have taken place. He thought that such a condition of things was materially facilitated by the ordinary semi-flexed position over the double inclined plane.

Dr. Wood said that a good surgeon always imitated nature, and that the semi-flexed position was the most easy and comfortable.

Dr. Sayre remarked that in the semi-flexed position, the tendons were apt to become contracted and give rise to a great deal of pain. In these cases, he thought it was better to divide them, and bring the limb out as nearly as possible in the straight position. He had seen gratifying results follow such treatment.

Dr. Wood had treated scores of cases on the double inclined plane, and had never seen any bad result following. The sub-luxation was altogether an accidental circumstance, and had nothing at all to do with the double inclined plane. He stated that the result coveted in these cases was anchylosis, and the limb was in the very best position for any such result, when over the doubled inclined plane. He flexed the limb at the angle of 30 degrees, and had so far found it to answer every purpose, both so far as progression and general comfort to the patient was concerned. Position in these cases was everything. This was strikingly exemplified in the rectangular position of the elbow joint. He stated that the leg flexed to the angle of 30 degrees was in a position that rendered the muscles passive; the same was the case with the position in anchylosis of elbow, and contraction of the muscles was not apt to take place.

Dr. Sayre observed that all the cases of anchylosis that he had seen, had been too angular. In regard to the position laid down in the books, he did not seem to agree with the authorities upon the subject. He made an exception in the case of the elbow.

Dr. Buck stated that he had known, in a case of luxation of knee from violence, that the lateral ligament, instead of rupturing, would tear out the surface of the condyle into which it was inserted. He said also, that, in luxation of the foot outwards with fracture of fibula, the outward lateral ligament often, instead of being ruptured, tore off the extremity of the internal malleolus. He said also that the displacement that he had noticed, as resulting from disease of the knee-joint, was dislocation outwards by which the inner condyle of the femur was rendered very prominent, the leg at the same time being rotated outwards on its axis and abducted on the thigh. He observed that, uniformly, as the change in the relations of the knee-joint from white swelling.

REGULAR MEETING, MARCH 9, 1859, DR. DALTON, PRESIDENT.

Necrosed bone.—Dr. Jas. R. Wood presented a specimen of *necrosed bone* which was taken from a man who four months before suffered amputation of the thigh for compound fracture of the leg. The wound healed soon after. The amputation was performed below the junction of the middle and lower thirds of the thigh. Shortly after it had closed over, dead bone began to show itself, and it was found that the whole of the circumference of the lower portion of the femur was in a necrosed condition, which gradually extended, the separation of the periosteum being encouraged by the frequent introduction of probes, etc., between it and the bone. Very soon new bone began to be deposited from this periosteum, which has increased until the present, when about 4½ inches of the distal extremity of the bone was removed by a pair of duck-bill forceps, the new deposit is enormous, being about four times the natural size of the bone.

In connection with this specimen he stated that Dr. Markoe looked upon the cause of necrosis in that locality as owing to a want of nutrition of the bone, the supply of blood from the medullary artery having been cut off; and referred to a very clever paper by that gentleman (Dr. M.) which was published in a recent number of the *New York Journal of Medicine.*

The next case was a leg and portion of the thigh which he removed three weeks ago from a boy eight years of age. In September last he was kicked on the shin by one of his playmates; inflammation followed; and the family physician applied leeches, but with little benefit. Poultices were afterwards kept applied, but the little patient suffered so much from pain in the part that Prof. Parker was called at the end of a fortnight. He made an incision two or three inches in length and found dead bone to exist. Dr. Parker saw the patient only once and the physician continued his attendance until Dr. Wood was called to the case. On examining the limb he found that there was necrosis of the tibia from the tubercle to within half an inch of the internal malleolus. He commenced enucleating the bone from the periosteum and watched with interest the favorable progress of the case, until the patient was seized with severe pain in the joint, terminating with suppurative inflammation, rendering amputation imperative. Previous to the operation however the joint was opened, a large quantity of pus being discharged.

The specimen showed that the whole of the anterior and lateral portion of the tibia was necrosed, and that new bone had formed around the sequestrum. Had it not been for the unfortunate complication at the lower end of the bone all the dead bone would have been removed and new bone would have occupied its place. A longitudinal section of the bone showed a cavity to exist both at its upper and lower end, which was filled with tuberculous matter and a cancellated sequestrum, as was proved by microscopical examination. He stated that the specimen proved that the deposit of new bony matter was greater in extent and amount than the dead material. In this particular it was analogous to many that he had reported. The wound after the amputation healed rapidly, and was closed up at the end of twenty days.

Dr. Markoe, in reference to the explanation of the formation of sequestrum, stated that he had examined over fifty femora in reference to the point at which the nutritious artery entered the bone. In about half the cases it entered at or below the middle of the femur.

In a certain number of cases the nutritious arteries are double, and in all cases they enter from below obliquely towards the upper extremity. He stated also that the artery previous to entering the bone traverses a greater or less extent of muscular tissue, as the case may be, and hence it was not impossible for the artery to branch from the femoral at least as low down as the middle third. Sequestra similar to the one presented by Dr. Wood, he stated were not common in the femur, radius and ulna—the nutritious arteries in these cases, the direction being from below upwards, were liable to be cut or sawn in amputation, hence the formation of such sequestra at the end of the bone In the tibia, fibula and humerus the nutritious artery enters from above downwards, and consequently is not implicated in amputations. He had never seen a sequestrum from the humerus.

Dr. Dalton—Is ligature of the femoral liable to be followed by necrosis?

Dr. Markoe answered in the negative. He stated further that the second specimen was a very interesting one. It showed that the bone was dead for two thirds of its extent, which is generally the case when the disease is the result of an injury. The disease at the lower end had extended through the cartilage of incrustation. This state of things occurs now and then in the knee-joint, but most frequently at the tibio-tarsal articulation. An amputation under such circumstances was imperative.

Dr. Wood presented a *third specimen* taken from a man sixty years of age, who entered Bellevue Hospital on the 17th of last September, with compound fracture of the tibia and fibula, the former bone being exposed to the extent of four inches. At the expiration of a fortnight this portion of the tibia was removed without any periosteum being attached to it. The patient went on doing very well, the wound healing nicely until the following November, when the parts became involved in a low grade of inflammation, in consequence of which the limb was amputated. On examination of the limb after removal a gratifying condition of things presented itself. Notwithstanding four inches of bone had been removed, comprising the whole circumference of the tibia, the space was occupied by a new bone, formed from the periosteum, which was left after enucleation. The callus was tolerably firm, and would have in due time united the upper and lower fragments. He stated that had the periosteum surrounding the detached fragment been removed there would have been no deposit, but by leaving it this restorative process threw out new bony material and the patient would have a very good and useful leg, had not the unhealthy suppuration taken place. He further stated that had this process been continued, the new matter deposited would have been greater in quantity and extent, than the original piece of bone removed. He said that in his judgment the time would come when by careful and patient treatment of these cases very few legs would be amputated—at least surgeons would be induced to save a good many more than they now do. He recollected when he was a student that amputation was a great deal more common than at present. Every case of compound comminuted fracture of the ankle was amputated; in fact, many limbs were condemned at the very outset, any attempt at restoration being considered out of the question, and that was the practice up to a very few years ago. He stated that the proper way in these cases was to coax nature to do her part; the success of such an endeavor was strikingly exemplified in the treatment of these fractures in the New York Hospital; especially by Dr. Buck's bran-splint. It is fortunate for the patient and creditable to the physician that conservative surgery is in the fashion.

Dr. Clark said there are three views advanced in regard to the cause of the changes that are noticed. One is that the uriniferous tubes are closed at two different points by inflammatory action, that the sacs become filled with the urinary secretion which afterwards becomes changed in its character—gradual accumulation of this fluid distends the sac so formed to a greater or less extent, as the case may be. Another idea is that the capsule of the malpighian body is the seat of the disease, and becomes gradually dilated and dilated until it attains the size of these that are presented. The third conjecture was that the individual cells of the epithelial lining of the tubes became greatly enlarged and vascular, and that by their increase these cysts were formed. He stated that if gentlemen would examine the kidneys they would come to the same conclusion that he did a good many years ago, that neither of these explanations were applicable to these cases. He maintained that the cysts were a new production, that they were entirely outside the interlocular in the midst of the bloodvessels. Each cell is complete of itself and contains granular matter to a considerable extent, the smaller ones containing nuclei. Under the microscope they were seen varying in size from something less than the diameter of the uriniferous tubes to eight or ten times their diameter—increasing in size, they are capable, under some circumstances, of holding a pint of fluid. The kidney tissue, as these cysts enlarge themselves, is stretched between them, forming septa of healthy structures.

PART SECOND.

CRITICAL ANALYSIS.

Art. VIII.—*Medico-Chirurgical Transactions. Published by the Royal Medical and Chirurgical Society of London.* Second Series, volume the twenty-third. London, 1858.

The volume of the Royal Medico-Chirurgical Society of London for 1858, sustains the high character of this serial publication; and we cannot do our readers more ample justice than by giving a brief synopsis of its principal articles.

1. *An account of a case of arterio-venous aneurism of the temporal vessels, which was treated by ligature of both the artery and the vein;* by Charles H. Moore, Surgeon to the Middlesex Hospital. The patient was a man aged 60, whose left temporal artery had been opened thirty-six years before, in Australia, for pain in the head. Bleeding returned several times, but was finally stopped by pressure. A small swelling in the site of the wound remained, which beat synchronously with the heart, but would cease when pressure was made behind the left ramus of the jaw. In time the temporal vessels enlarged to the size of the fist, and a peculiar sound was noticed in the swelling. An abscess finally formed in the diseased part, which opened and discharged for three weeks, when there was a severe hemorrhage, that had to be restrained by pressure. It recurred again severely at the end of a fortnight. He now came under the notice of Mr. Moore; the scalp was swollen and œdematous; there was an abscess behind the ear, and an ulcer in the temple; large and tortuous vessels could be felt beating around the tumor, which ceased to pulsate when pressure was made in the parotid space; two large veins appeared in the neck in the course of the external jugular, having an arterial pulsation, and vibratile thrill in the upper part. It was decided to ligate the temporal or external carotid artery. An incision was made behind the ramus of the jaw, and a ligature placed around a pulsating vessel which proved to be the temporal vein. The artery was then found and tied, when all pulsation in the tumor ceased. The patient rapidly recovered.

2. *Case of communication with the stomach through the abdominal parietes, produced by ulceration from external pressure, with observations on the cases of gastro-cutaneous fistulæ already recorded;* by Charles Murchison, M.D., Assist. Phys. to King's College Hospital.—Perforation of the stomach in this case occurred in a hysterical female, who kept up ulceration from a seton by the pressure of a penny, until the coats of that viscus were perforated. To this case Dr. Murchison adds 24 other cases of

gastro-cutaneous fistulæ, and from the aggregate draws many interesting conclusions. *Causes.*—Incised wounds, 3; gun-shot wounds, 2; a blow, followed by an abscess, 1; ulceration from pressure, 1; cancer, 6; perforating ulcer, 12. *Situation.*—Between left ribs, 4; remainder according to seat of disease or injury. *Size.*—Doubtful 7; less than an inch, 6; one inch, 7; one and a-half inches, 1; two inches, 1; four inches. 1; two cases it was at first one inch but increased to the size of a half or whole crown piece. *Duration of fistula and possibility of cure.*—Cancer, all fatal within three months; wounds, generally mortal, or speedily cured; if persistent may remain for years; six of the latter became closed, 2 being from wounds, 4 from simple ulcer; 4 closed spontaneously, 2 of which reopened; 2 by treatment. *General health of persons with gastro-cutaneous fistulæ;* principal abnormal symptoms, great thirst, increased appetite, obstinate constipation, deficient secretion of urine; amenorrhœa; vomiting very unusual, even if present before. *Mechanism of vomiting.*—1. A long inspiration followed by partial closure of the glottis. 2. Contraction of the pyloric end of the stomach, with relaxation of the cardia and œsophagus. 3. Persistent contraction of the diaphragm, with rigid contraction of the recti and oblique muscles.

3-4. *On the influence of liquor potassæ, and other caustic alkaline solutions, upon the therapeutic properties of henbane, belladonna, and stramonium;* by Alfred B. Garrod, M.D., Prof. Mat. Med. Therapeutics, and Clinical Medicine in Univ. College. Dr. Garrod has found by a series of careful experiments that a given quantity of liq. potas. will completely neutralize the action of hyosciamus, belladonna, and stramonium. The following formulæ exhibit the results of his experiments: tr. hyos., ʒj., liq. potas. ℥v. dilated the pupil; tr. hyos., ʒj., liq. potas. ℥x. dilated the pupil; tr. hyos. ʒi. liq. potas. ℥x. no dilatation in three instances. Extract hyosciamus, gr. v. to liq. potass. ℥xxv., no dilatation in two trials; gr. x. of the former to ℥xxx. of the latter gave moderate dilatation; gr. x. to ℥xl. no dilatation in seven cases. *Stramonium.*—Extr. stramonii gr. v., liq. potas. ℥xx., no action on five eyes. *Belladonna.*—Tr. belladonnæ ʒj. liq. potas. ℥x., some dilatation of pupil; tr. bellad. ʒj. liq. potas. ℥xv., no dilatation in five cases. *Atropine.*—Atropine, gr. ½, dilated pupil intensely; with ℥xxv. liq. potas., no action on pupil. These are but a few of the examples given to prove the destructive effects of caustic alkalies upon the therapeutic properties of henbane, belladonna and stramonium. The subject is one of practical interest, as these remedies are very commonly combined in practice.

5. *Contribution to the science of teratology;* by Henry R. Silvester, M.D. Dr. Silvester furnishes a minute dissection of the upper extremities of a child congenitally deformed, with plates illustrative.

6. *On some points in the pathology and morbid anatomy of glaucoma;* by J. W. Hulke, Assist. Surg. to King's College Hospital. Mr. Hulke states that he had frequent opportunities to dissect eyes affected with glaucoma directly after extirpation, and in his short paper he gives the results of his studies. The most interesting fact noticed is the change in the vessels of the retina, which are irregularly dilated, and studded

with small fusiform and globular enlargements, miniature aneurismal pouches. This is due to the impeded circulation through the central vein of the retina, owing to changes in the optic papillæ; the pressure thus becomes so great that the small vessels yield. The pain and the paralysis of the iris are owing to the great pressure upon the ciliary nerves, and are relieved when this pressure is removed.

7. *On the analysis and immediate principles of human excrements in the diseased state;* by W. Marcet, M.D., Assist. Phys. to the Westminster Hospital. From a synoptical table appended to Dr. M.'s paper, we give his method of analyzing human excrements. 1. Exhaust with alcohol and strain through a cloth. 2. The solution yields on cooling a deposit, and solution; (a) the deposit exhausted with alcohol yields an insoluble residue and solution; this residue dissolved with potash and treated with hydrochloric acid may be examined for lime, magnesia, etc.; the solution may deposit crystals of fatty acids, while the residue treated with ether yields *fatty acids*, and *soaps;* (b) the solution is mixed with milk of lime, which precipitated, treat with ether and it yields an ethereal solution, *Excretine, coloring matter;* a residue, which decomposed with hydrochloric acid yields a solution of chloride of calcium and solid substance of fatty acids; a solution which evaporated to dryness, decomposed with sulphuric acid, exhausted with a mixture of alcohol and ether, may be tested for organic acids.

8, 9. *On the membrana decidua which surrounds the ovum in cases of tubal gestation;* by Robert Lee, M.D., Physician to the British Lying-in-Hospital, etc. In this paper Dr. Lee introduces a number of cases of extra-uterine fœtation, which proved on examination after death that the ovum was surrounded by a decidua. The older writers describe a deciduous membrane in the uterus in these cases.

10. *On the action of galvanism upon the contractile structure of the gravid uterus, and its remedial powers in obstetric practice;* by F. W. Mackenzie, M.D., Senior Physician to the Western General Dispensary. The influence of galvanism upon the uterus in producing contraction of such a character as to be serviceable in hemorrhage or labor, has long been a mooted question. To decide this point, Dr. Mackenzie instituted a series of experiments upon the exposed uterus of a pregnant bitch. The result is thus stated: "The most efficacious mode of employing galvanism, so as to obtain its most effective influence upon the gravid uterus, is to direct the current in a longitudinal direction through the organ from the upper portion of the spinal cord; that is to say, by applying the positive pole of the machine to the upper part of the spine, and the negative to the cervix uteri." He subsequently had opportunities to test this remedy in practice, and concludes: That electricity thus employed, exercises a remarkable influence in increasing the tonicity or contractility of the uterine fibre, and therefore it is a powerful and safe means of controlling uterine hemorrhage, whether accidental or unavoidable.

11. *A case of complete inversion of the uterus, of nearly twelve years' duration, successfully treated;* by W. Tyler Smith, M.D., Lecturer on

Midwifery at St Mary's Hospital. The method of reduction in this case was, *first*, moulding the tumor daily with the hand, and upward pressure. *Second*, the use of the air-pessary in the vagina in the interval. The author strongly recommends the air-pessary as a tampon.

12. *On excision of the knee;* by GEORGE MURRAY HUMPHREY, Surgeon to Addenbrooke's Hospital. Mr. Humphrey gives the details of 13 cases in which he has performed this important operation. The results are as follows: Died 1; amputation and recovery 4; good results 8. In selecting cases for this operation Mr. H. prefers farmers to artisans, and an articulation not the subject of acute disease, or advanced disorganization. This paper merits the attentive consideration of surgeons.

13. *Contributions to the etiology of continued fever: or an investigation of various causes which influence the prevalence or mortality of its different forms;* by CHARLES MURCHISON, M.D., Assist. Phys. to King's College Hospital. This is one of the most elaborate papers in the volume, and we regret our inability to notice it further, at this time, than by its title.

14. *Case of hydatids of the tibia;* by WILLIAM COULSON, Senior Surgeon to St. Mary's Hospital. This affection is so rare that the *Transactions* of the Society contain but a single case. Mr. C.'s patient was a female, aged 25, who several years previously had received a kick on the upper part of the tibia; a swelling followed, which finally burst, giving exit to hydatids. It was treated by laying open the cavity and applying caustics freely.

15. *A case of fibrous polypus of the urinary bladder, with observations and a table of the recorded cases;* by JOHN BIRKETT, Surgeon to Guy's Hospital. The case which forms the basis of this paper occurred in a girl, aged 5; she suffered from dysuria, and on examination the tumor was found projecting from the meatus urinarius. She died soon after admission to the hospital. The autopsy revealed numerous large polypoid growths attached to the inner surface of the anterior wall, and filling the cavity. The table appended to the paper comprises 10 cases; of these 8 died; in 2 the fungus was removed; 1, a female, by incision of meatus and ligature; 1, by cystotomy and twisting.

16. *Researches on gout;* by ALFRED B. GARROD, M.D., Prof. Mat. Med., etc.

17. *Contributions to the pathology of the glandular structures of the stomach;* by WILSON FOX, M.D.

18. *On the influence of the cervical portions of the sympathetic nerve and spinal cord upon the eye and its appendages, illustrated by clinical cases, with observations;* by JOHN W. OGLE, M.D., Assist. Phys. to St. George's Hospital.

19. *An account of a case of calculus in the bladder removed by lithotrity, in which a communication existed between the bladder and intestines;* by CHARLES HAWKINS, Vice-President to the Society.

20. *On a case of dislocation of the humerus, upwards and inwards, with fracture of the coracoid process of the scapula; accompanied by a dis-*

section of the parts involved in the injury; by T. HOLMES, M.A., Curator of St. George's Hospital Museum.

21. *On a case of premature puberty;* by ROBERT BATH SMART, M.R.C.S.

ART. IX.—*A Course of Lectures on Obstetrics*, by WM. TYLER SMITH, M.D. Edited and Annotated by AUGUSTUS K. GARDNER, A.M., M.D. New York: Robert M. DeWitt. pp. 749. Illustrations, 212.

THOSE who are called on to answer that difficult question from the student and young practitioner, "What text-books do you recommend?" will be glad to learn that this edition of Tyler Smith has been brought within the reach of the class for whom it was designed. Obviously, it cannot be recommended as all-sufficient in itself. Obstetrics are unlike anatomy or the materia medica, in which one complete work may supply the wants of the class alluded to. Principles of treatment yet in litigation; facts but little known and awaiting the light yet to be reflected from physiology, pathology, chemistry, and therapeutics; the influence of routine, and religious views regarding the value of fœtal life; while lending a special charm to study of the subject, forbid that any one man in any country shall in a single volume do for obstetrics what Wilson has done for Anatomy, or Wood and Bache for the Materia Medica.

Dr. Gardner was convinced that if these lectures were "collected into a volume they would constitute the best body of midwifery extant."

The result of this conviction has been to present us with a "*body*" which Dr. Gardner has materially improved by the addition of about one hundred pages of interesting and instructive matter, also embodying the recent American contributions to obstetrics. The most valuable suggestion of novelty from this quarter is the plan proposed by Dr. Thomas, in funis presentations, with which the readers of the Journal are familiar; and it will be interesting to note the certain reproduction of his illustrations in the forthcoming obstetric works.

We are of those who are only too happy to see English books reproduced in this country when, as in this case, the additions are such as to justify the use of the annotator's name on the title page; and we trust that the time will soon have gone when an American physician shall parade his name as editor when his duties have been confined to proof-reading.

The time has not yet come when complete works on obstetrics or full courses of lectures can be considered as unnecessary; and we moreover think that the publication of a course of clinical lectures amply illustrated by cases after the plan of Bennett's Clinical Medicine, would be of great value.

Unfortunately, German literature is without the reach of the mass of our profession; while French is so generally read as to leave much less to be desired in that direction. The labors of Dr. Noeggerath and Dr. Jacobi in this Journal supply a great want to those unable to read the current German literature of the day; but it seems strange that no young professional man in this city, desirous of associating his name with obstetrics, has employed his leisure in translating and annotating one of the many valuable obstetric works in that language. The work of Braun, we have reason to believe, however, will soon be brought within the reach of our students; and if the complete work be as well translated and annotated as were the chapters on puerperal convulsions, by Matthew Duncan, a great want will be supplied. But the German press teems with monographs of the greatest erudition and originality, the translation of which would involve but little labor to the linguist, or expense to the publisher, while the effort would favorably predispose the profession to one thus engaged in their behalf.

The teachings of Tyler Smith are eminently sound and practical, and such as can be safely recommended to the student; and it is gratifying to see that the influence of Robert Lee, the traditional rules of English operative midwifery as enforced by Osborn, and Denman, and Collins, fail to stem the advance of sounder and more enlightened principles of obstetric surgery.

The discussion of the various points of interest to the reviewer contained in this volume, or the enumeration of the original views and illustrations of the author, would demand more space than can be afforded; a fact less to be regretted, as we can confidently recommend alike the book and the annotations to the study of the student and the library of the professional man. G. T. E.

ART. X.—*Practical Midwifery, comprising an account of* 13,478 *deliveries which occurred in the Dublin Lying-in Hospital.* By E. B. SINCLAIR, A.B., T.C.D., and GEORGE JOHNSTON, M.D. London, 1858.

Drei und vierzigster Jahresbericht der Gebäranstalt der königl. Sächsichen medic.-chirurg. Academie zu Dresden. In Monatsschrift für Geburtshülfe. XII. Dez. 1858.

Forty-third Annual Report of the Lying-in Hospital of the Royal Medico-chirurg. Academy at Dresden. By Dr. GREUSER.—In Monatsschrift für Geburtsh. XII. Dec. 1858.

Bericht über die Vorfälle in des geburtshülflichen und gynaekologischen Klinik und Poliklinik zu Jena, während der Jahre 1855, 1856, 1857. Von ED. MARTIN.—In Monatsschrift f. Geburtsh. XII. 3 Sept., 1858.

Report of the Obstetrical and Gynæcological Clinic of Jena, for 1855, 1856, 1857. By ED. MARTIN, M.D.—In Monatsschrift f. Geb. XII. 3 Sep., 1858.

Jahresbericht von der geburtshülflichen Klinik für Hebammen in Wien für das Jahr 1857. Von Dr. HABIT.—In Zeitschrift der Gesellschaft der Aerzte zu Wien. No. 21, 22, 23. 1858.

Annual Report of the Obstetric Clinic for Midwives in Vienna, for 1857. By Dr. HABIT.—In Zeitschrift d. Gesellsch. d. Aerzte zu Wien. No. 21, 22, 23. 1858.

Bericht über die Leistungen der unter der Leitung des Hofrath und Prof. Dr. v. Scanzoni stehenden geburtshülflichen Klinik zu Wurtzburg, vom 1 *Nov.* 1853 *bis* 31 *Octob.*, 1856. Von Dr. J. B. SCHMIDT.—In Scanzoni's Beiträge z. Geburtsh. Bd. 3. 1858.

Report of the Obstetrical Clinic of Prof. Scanzoni at Wurzburg, from Nov. 1, 1853 *to Octob.* 31, 1856. By J. B. SCHMIDT, M.D.—Scanzoni's Beiträge z. Geburtsh. Vol. 3. 1858.

MR. SINCLAIR and Johnston's work on Practical Midwifery, consists of an account of 13,748 deliveries which occurred in the Dublin Lying-in Hospital during the seven years of Dr. Skelton's mastership, while the authors were assistant-physicians for the greater part of that period. The preface of the work contains an interesting account of the origin, progress and management of the hospital, and a description is also given of the general routine treatment which patients undergo from the time of their entrance to their discharge when convalescent. All labors are arranged under four principal heads: 1. Natural; 2. Difficult; 3. Preternatural; 4. Anomalous. The proportion of male to female births is 105 boys to every 100 girls. The total number of stillborn children was 968, or about 1 in every 14 of those born. Of these, however, 487 were putrid at the time of birth. Of the 481 non-putrid children, 284 were males and 197 females, which shows, that male children are exposed to greater risks immediately before and during birth than females. The total number of maternal deaths from all causes was about 1 in 84; deducting, however, 17, which were admitted dying into the hospital, the mortality was 1 in 94. Of the 163 women dying from all causes, 40 died from other than puerperal ones, leaving thus 123 deaths out of 13,748 deliveries directly traceable to the labor, or about 1 in every 111 women delivered died from puerperal causes. In the months of December in each year the greatest mortality was found to prevail, the ratio being 1 in 46, and the lowest in May, the ratio being 1 in 184. Of those labors, which terminated within the first hour, 1 in 110 mothers died; while of those women who were delivered during the second and third hours, only 1 in 243 died. In the first six hours the proportion of maternal deaths is 1 in every 178; from seven to twelve hours, 1 in every 144; and from thirteen to twenty-four hours, 1 in every 124. In those cases, where labor was prolonged beyond twenty-four hours, but in which there was no interference, the mortality reaches as high as 1 in every 20½.

The forceps deliveries amounted to 200, and the craniotomy cases to 130. The mortality in the forceps cases amounted to 11 mothers, or about 1 in 18; and 17 children, two of the latter being putrid at birth. Of the craniotomy cases 26 mothers died, or 1 in every 5. In using the forceps, traction was made during a pain only, in the direction of the axis of the pelvis; and no motion whatever was permitted in a lateral direction. Craniotomy was never had recourse to when the forceps could be applied, even if the child's heart had never been heard during labor.

In prolapse of the funis considerably more than one-half of the children were lost. Accidental hemorrhage occurred in 81 labors, 4 mothers dying and 27 children being dead-born; instrumental interference was needed in 8 cases. Of placenta previa only 24 instances occurred in the entire number of deliveries. Of these, however, 6 mothers died. Of the 8 cases of complete placental presentation, only 3 recovered and only 3 children were born alive. The treatment adopted was according to the circumstances of each particular case. In all cases of post-partum hemorrhage a stream of cold water was thrown into the uterus, and with the best success. Induction of premature labor was performed in 4 cases, and each of the mothers recovered, but only 1 child was saved. In two cases, where it was induced on account of general dropsy, both mothers died. Chloroform was given in nearly all cases before operation, and during the seven years not a single accident took place that could be attributed to the use of chloroform. Of puerperal fever, which however never appeared in a severe epidemic form, 129 cases are reported or 1 in every 106 of the whole. Eighteen cases of trismus neonatorum are given in this report, and all died within ten days; it seemed to make its appearance in an epidemic form.

From Dr. Greuser's report we take the following data. In 1857, 433 pregnant women were received in the Dresden Lying-in Hospital. Of 412 deliveries, 373 were effected without surgical interference; 20 by the forceps, 1 by turning, 5 by extraction, 3 by perforation and cephalotripsis, 1 by accouchement forcé ; while in nine cases artificial removal of the placenta was required. All the women recovered with the exception of 5; out of this number 2 died from peritonitis, 1 from pyæmia, 1 from uræmia and 1 from ruptura uteri. The number of new-born children was 414, among which were two pairs of twins, altogether 219 boys and 195 girls; 18 male and 6 female children were still-born, and all of them resuscitated; 13 boys and 9 girls died before delivery, 4 in far advanced maceration, 1 immature, 3 from pressure of the cord, 1 from internal hemorrhage in consequence of uterine rupture, 3 from compression of the brain during the passage of the head through a contracted brim, 3 from protracted labor, with consecutive craniotomy.

The presentations were as follows:

303 in 1st cranial,
89 in 2nd "
3 in 3rd "
1 in 1st facial,
1 in 2nd "
4 in 1st breech,
6 in 1st feet,
2 in 2nd "
1 in 2nd shoulder.

In 4 cases the presentation is not noted.

The largest placenta was 8 and 9 inches in its diameter, the smallest 4, while 45 placentæ had fibrinous and 5 had calcareous deposits on their uterine surface.

The indications for the 20 forceps operations were : 9 for increasing diminution of the fœtal pulsation in force and frequency ; 5 for prolapsus of the funis ; 1 for imminent suffocation of the mother, in consequence of a large struma lymphatica ; 1 for eclampsia ; 1 for internal hemorrhage from ruptura uteri ; 1 for metrorrhagia in the last stage of labor ; 3 for rhachitic contraction of the pelvis. Five out of these 20 children were born dead ; 5 were still-born and revived ; 2 mothers died, 1 from eclampsia, 1 from ruptura uteri.

From the statistical tables reported in Dr. Martin's report, we take the following facts :

1855.—Of 88 new-born children (1 pair of twins and 4 still-born), 38 were of the male, 50 of the female sex. Obstetrical operations were required 35 times, among which was 1 Cæsarian operation post mortem, giving a dead child ; 15 forceps operations ; 4 craniotomy-forceps operations.

1856.—Of 111 children born in the hospital, 4 were still-born, and 1 pair of twins. In the polyclinic, 1 case of premature quadruplets was observed. The examination of the afterbirth showed that three ovules had been fructified. There were altogether 98 cases of dystocia (out of 159 deliveries) and 37 operations, among which were 18 forceps operations.

1857.—Of 164 deliveries, 7 cases of twins occurred, giving a total of 171 children-born, among which were 100 males and 71 females ; 16 of them died before or during confinement. In these 164 cases 46 operations were required. The transfusion of blood was successfully performed in a case of hemorrhage from placenta prævia.

PRESENTATIONS.

Naegele's I. Cranial presentation,	224	Presentation of nates, II. . .	1
" II. " "	119	Foot presentations, I. . . .	2
" III. " "	2	" " II. . . .	3
" IV. " "	1	Knee presentation, . . .	1
Undecided " "	9	Transverse presentations, . .	2
Facial presentation, I. . .	1		
Presentation of nates, I. . .	3		370

After 52 forceps operations 2 mothers and 5 children died.

Dr. Habit's report contains the following : There remained from last year 80 pregnant women, 77 in childbed, 67 children ; 3,835 pregnant women received in the hospital, of which 3,795 were delivered. 33 dismissed undelivered, 87 remained at the end of the year. Of 3,872 women in childbed, 3,702 were dismissed healthy, 83 died, 87 remained. Of 3.727 children, 1,965 were males, and 1,762 females ; 119 were still-born (65 males, 54 females); discharged 3.568 children, 146 died, 80 remained ; 860 were so-called "gassengeburten (*i. e.*, women delivered immediately before entering the hospital); premature confinements, 249 ; twins, 51 ; 3,663 cranial presentations, 27 face presentations, 95 foot and nates presentations, 52 cross presentations. The operation of turning upon the head was performed in 21 cases, upon the feet in 32 ; inductions of premature labor, 2 ; convulsions, 13 ; hemorrhages, 35 ; ruptura uteri spontanea, 2 ; forceps operations, 43 ; perforation, 5 ; Cæsarian operation post mortem, 1 ; artificial removal of the afterbirth, 15 ; diseases of the puerperal state, 182 ; deaths, 83.

From Dr. J. B. Schmidt's report we give the following facts of 879 births; 869 were simple, and 10 twin-births; 839 children born alive, 50 dead:

I. Cranial presentation, . .	606	Feet presentation, . . .	6
II. " " . .	231	Cross " . . .	13
I. Facial " . .	1	Uncertain " . . .	11
II. " " . .	3		——
I. Breech " . .	12		889
II. " " . .	6		

Atonic pains were observed in 42 cases, and treated with the colpeurynter, the douche, carbonic acid, or ergot of rye; spasmodic pains, 24; treatment: opium, tepid baths, chloroform, colpeurynter and douche; ruptures of the perineum, 18, three being to the sphincter ani; to prevent perineal ruptures, the labia were incised 85 times; pelvic deformities 15, 7 delivered naturally, 3 with the forceps, 2 by perforations and cephalotripsis, 1 by extraction on one foot, 2 by induction of premature confinement. Eclampsia observed in 1 case, chloroform used, mother died suddenly. Placenta prævia partialis, 3 cases, colpeurynter, opening of the membranes; plac. pr. central, 1 case, turning and extraction of the child; three mothers recovered—one died afterwards from puerperal fever—2 children born alive, 2 dead. Prolapsus of the funis, 11, 6 with cranial presentation. Induction of premature labor was performed 3 times. Case 1.—Hydræmia, catarrh of the kidneys, dyspnœa; application of sucking glasses to the breast nine times in three days, inefficient pains; douche twice a day for a week, insufficient pains; injections with secale cornutum, strong pains, os dilated to the size of a gulden; membranes detached with the sound, two hours afterwards birth of a dead child weighing 2½ pounds; mother recovered. Case 2.—Pelvic contraction, antero-posterior, diameter 3¼ to 3½, induction of premature labor by six applications of carbonic acid to the vaginal portion in five days; child born alive, mother recovered. Case 3.—Contracted pelvis, sucking glasses, douche, colpeurynter, all without exciting labor pains; tapping of the membranes; cross presentation, turning; child dead, mother recovered. Case 4.—Contracted pelvis, carbonic acid gas, injection of decoctum althææ, plugging of the vagina (Shœller), opening of the membranes (Meissner's method); child born dead, in foot presentation; mother recovered after being taken with endometritis. Forceps operation 47, all mothers recovered except one, who died from puerperal fever; 42 children born alive, 5 dead. Craniotomy 2, both from contracted pelvis; one mother died from endometritis and pyæmia.

From Dr. Gregor Schmidt's report it appears that during the six years from 1850 to 1856, 1,639 women were delivered in the lying-in hospital, and among this number 27 twin births were observed, making a total of 1,666 children, of which 1,536 were born alive, 130 still born; 113 of the children born alive died afterwards in the hospital.

I. Cranial presentations, . .	1109	Breech presentations, . .	25
II. " " . .	443	Feet " . .	23
I. Facial " . .	6	Cross " . .	24
II. " " . .	4	Uncertain " . .	26

Operations: 1. Inductions of premature labor, 6; mothers recovered, 6; children born alive, 3; dead, 3. 2. Forceps operations, 100; mothers recovered, 94; died, 6; children born alive, 80; dead, 20. 3. Extractions, 39; all mothers recovered; children born alive, 26; dead, 13. 4. Turning by one foot, 24; mothers recovered 22; died, 2; children born alive, 12; dead, 12. 5. Craniotomy, 5; mothers recovered, 4; died, 1; operation with Van Huevel's forceps-scie, 1; mother recovered. E. N.

BIBLIOGRAPHICAL NOTICES.

Art. XI.—*A Treatise on Fractures.* By J. F. Malgaigne, Chirurgeon de l'Hôpital Saint Louis, etc., with one hundred and six illustrations. Translated from the French, with notes and additions, by John H. Packard, M.D. Philadelphia: J. B. Lippincott & Co., 1859, pp. 683.

Every surgeon will hail the appearance of this work in an English dress, as a most valuable acquisition to our surgical literature. Comprehensive in its design, minute in its details, accurate in statistics, it has taken precedence of all works hitherto published on the same subject, as an authority. We are proud of the achievement of Dr. Packard, the translator, and congratulate him upon the successful termination of his labors. We trust the favor with which this work is received by the profession will induce him to prepare at once for publication, the volume on dislocations.

Like all works issued by this publishing house the appearance of the volume is altogether unexceptionable. We need scarcely commend this work to the notice of the profession, so well and favorably is it already known.

Art. XII.—*Ventilation in American Dwellings, with a series of Diagrams, presenting examples in the different classes of habitations.* By David Boswell Reid, M.D., F.R.S.E., etc., etc. To which is added an introductory outline of the progress of improvement in ventilation, by Elisha Harris, M.D. New York: Wiley & Halsted, 1858.

The progress of sanitary science has developed one most important fact which is now beginning to be recognized, not only by philanthropists, but even by governments, viz.: that the material prosperity of a nation is not to be estimated so much by its statistics of manufacture, agriculture and commerce, as by the social condition of its people. Though national wealth have no constant relation to national health, as the former is often produced at the sacrifice of the latter, yet even modern and enlightened statesmen will seek in the vital statistics of the country, the condition of its resources for a productive industry, or its material prosperity.

In the homes of the people, therefore, we find the true basis of national strength and ultimate greatness; whatever is added to the physical well-being of the individual is so much added to the nation's resources. And hence the first duty of a wise goverument is to establish among the people correct ideas in the art of living. In no particular do the masses show greater ignorance of the physical laws upon which health and domestic happiness depends, than in the construction of their dwellings. Ventilation is scarcely, if ever, thought of by proprietor or architect, in the construction of either the farm-house or the palace, the school-house or church.

The work before us is designed to diffuse a general knowledge of the principles on which buildings, public and private, should be constructed, with reference to ventilation. The author, Dr. Reid, has given to the study of this subject, the greater part of an active life, and brings to its elucidation, a vast experience in the examination and construction of public buildings abroad. The introduction by Dr. Elisha Harris, of this city, gives an interesting history of the progress of architecture in reference to ventilation, from the earliest period to the present.

Art. XIII.—*A Treatise on the Venereal Disease.* By John Hunter, F.R.S., with copious additions, by Dr. Philip Ricord, Surgeon of the Hôpital du Midi, Paris, etc. Translated and edited, with notes, by Freeman J. Bumstead, M.D., lecturer on Venereal at the College of Physicians and Surgeons, N.Y. Second edition, revised, containing a résumé of Ricord's recent Lectures on Chancre. Philadelphia: Blanchard & Lea, 1859, pp. 552.

On the appearance of the first edition of this work it received a favorable notice in our pages. The present edition is improved by the addition of the more recent views of Ricord, as published in a late work by M. Fournier, Interne of the Hôpital du Midi. As now issued the work presents to the profession a very complete treatise on venereal, embracing the opinions of Hunter and Ricord, with judicious notes and criticisms, by Home and Babington, and important additions by the American editor, Dr. Bumstead.

Art. XIV.—*A Practical Treatise on the Causes, Symptoms and Treatment of Spermatorrhœa.* By M. Lallemand, translated and edited by Henry J. McDougall, member Royal College Surgery, England. Third American edition. To which is added, On Diseases of the Vesiculæ Seminales, and their associated organs; with special reference to the morbid secretions of the prostatic and urethral mucous membrane, by Morris Wilson, M.D. Philadelphia: Blanchard & Lea, 1858, pp. 380.

The treatise of Lallemand on spermatorrhœa, of which we now have a third edition, is well known to the American surgeon, and his method of treating this malady is properly appreciated. That caustic applications to the prostatic portion of the urethra are often serviceable in this affection there can be no doubt, but that they should be resorted to as indiscriminately as this author teaches, experience positively denies.

The monograph of Dr. Wilson of London, is a very judicious supplement to the preceding work, and will counteract its evil tendencies. The author investigates this affection in a scientific manner, and his treatment is correspondingly discriminating. This volume embraces our present knowledge of the disease known as spermatorrhœa.

Art. XV.—*A Treatise on Venereal Diseases.* By A. Vidal (de Cassis), Surgeon of the Venereal Hospital of Paris, etc. With colored plates. Translated, with annotations, by George C. Blackman, M.D., Professor of Surgery in the Medical College of Ohio, etc. Third edition. New York: Samuel S. & William Wood, 1859, pp. 499.

The third edition of Vidal's treatise on venereal is revised from the last French edition issued by the author, and so far as relates to his own views must be final. It contains in addition to former editions, illustrations of the *accidents tardifs*, copied from the French. This work has met with general favor, both in Europe and in this country.

Art. XVI—*The Uræmic Convulsions of Pregnancy, Parturition and Childbed.* By Dr. Carl R. Braun, Professor of Midwifery, Vienna. Translated from the German, with notes; by J. Mathews Duncan, F.R.C.P.E., Lecturer on Midwifery, etc. New York: S. S. & W. Wood, 1858, pp. 182.

This work is a single chapter from the new text-book of Midwifery of Dr. Braun. It was first contributed by Dr. Duncan to the *Edinburgh Medical Journal*, and it has met with such a favorable reception that the translator has been induced to issue it as a separate volume. It contains in a condensed form the most complete and reliable history of this affection yet published. We trust that no general pr. ctitioner will fail to obtain, and carefully study this excellent monograph.

Art. XVII.—*A popular Manual of Female Diseases; their causes, symptoms, prevention and cure; including the diseases of pregnancy and childbirth.* By Robert H. Bakewell, M.D. London: Richard Kimpton, 1859, pp. 162.

This work is designed for popular reading, and in style and matter is well adapted to instruct females in regard to their peculiar infirmities. Practitioners often feel the need of a manual of this kind, judiciously prepared, which they can recommend to intelligent female patients. Such a work is this of Dr. Bakewell.

PART THIRD.

MEDICAL RETROSPECT.

DIPHTHERITE.

As this disease is now so wide-spread as to attract the almost universal attention of the profession, the following facts collected from various sources may prove of interest:

Its History.—Dr. Hillier,* of London, after referring to the various epidemics of sore-throat described by early writers, proceeds as follows: Dr. Bard, of New York, writing in 1771, is the first author who distinctly describes the formation of a false membrane similar to that which is found in croup. He describes cases in which there was angina alone, others in which angina was combined with laryngitis, and others in which there was laryngitis alone. He quite discards the notion of gangrene or ulceration, which all the previous writers had described, and considers the white appearances to depend on an exudation. These views were nearly lost sight of until M. Bretonneau, in the beginning of the present century (1826), wrote a treatise on diphtherite, in which he states that this throat affection is not attended with ulceration or gangrene, but is closely identified in every respect with croup. Since Bretonneau's time the disease has been described by many French writers, among whom are Guersent, Isambert, Rilliet, Barthez, Trousseau, Bouchut, and Empis. There was a very virulent epidemic in Paris in 1855. From the early part of 1855, to March, 1857, a very virulent epidemic of it prevailed in Boulogne, during which there died 366 persons, of whom many were English. There was less disposition in the false membrane to spread to the larynx than had been noticed by Bretonneau. The recoveries were attended with extreme debility, and occasionally by gastro-intestinal complications. M. Lemoine describes an epidemic at Nievre, in which the air-passages usually escaped. M. Jobert has described another in the department of Haute Marne, where the nasal fossæ were usually invaded, and not often the larynx. M. Lespiau has given us an account of an epidemic which occurred among the soldiers at Avignon, in the autumn of 1853: here the false membrane usually spread to the air passages. Of 1,796 soldiers, 195 were attacked; and out of 22 children, 4. In the cases secondary to other diseases nearly all died; while in the primary cases only 6 per cent. died. Such, then, is the French account of this disease as existing in that country during the present century. I must now come down to the epidemic which has been described in this country during the past eighteen months. It first attracted general attention in England of late years in the autumn of 1857, a few cases having occurred for twelve months previously; during the winter it increased and prevailed in Kent, especially near Canterbury, Essex, Suffolk and Norfolk; subsequently it spread to Staffordshire and the midland counties. During June, July, and August, it spread northwards to Lincolnshire and Yorkshire; and since then has prevailed in very many parts of England.

---

* *Medical Times and Gazette*, Jan. 29, 1859.

In this country there has been a very general prevalence of this disease during the last year, and in certain localities it has been very fatal.

Its Character.—Dr. Hillier gives the views of writers: Bretonneau lays great stress on the great resemblance during life between the false membranes on the back of the throat and sloughs. If the patches are circumscribed, the œdematous swelling of the cellular tissue around makes them appear depressed, and one is tempted to believe that one has a foul ulcer with a considerable loss of substance. If, on the contrary, they are extended on large surfaces, they are partly detached, hang in flakes more or less putrified, and simulate the last degree of sphacelus.' The disease to which he gave this new name had the following characters: 'The diphtheritic inflammation, he says, extends itself nearly as a liquid which is poured out. There are often some long narrow stripes of a deep red color, which stretch into the pharynx or descend into the trachea. A band of exudation matter is formed on the middle of each stripe.' He thinks that, except by post-mortem examination it is often impossible to distinguish between false membrane and sloughs; and even after death unless the examination be careful the two may be confounded. Its onset was not usually very alarming, but manifested only by a slight difficulty in swallowing, and sometimes by gentle pain. There was slight febrile disturbance, and prostration more or less marked. Soon the characteristic false membrane was seen. Before its appearance there was a circumscribed and punctiform redness observed in the pharynx, without any swelling. It was nearly always in one tonsil that these appearances commenced, and the whole gland was soon involved. A little later, on the surface of the tonsil, little opaque patches formed like coagulated mucus. According to Bretonneau, under this layer mucous may afresh accumulate at certain points, and simulate vesicles or small pustules. At first the false membrane is transparent, but it soon becomes opaque and more consistent. It varies from a very thin membrane to a quarter of an inch. Its color varies from yellowish white to greyish or even black. It extends in width the redness of mucous membrane preceding its formation. On lifting the morbid product it is found united to the mucous membrane by small filaments, which Bretonneau thinks penetrate the mucous follicles. The seat of exudation is said to be between the epithelium and corium. The mucous membrane underneath was injected of a dull red color; on it were often seen black ecchymoses, oblong and irregular in outline; they were sometimes enough to make the membrane livid and like a cancerous excrescence. The lymphatic glands of the neck always became engorged. The breath was commonly fetid. There was usually salivation, the matter being yellow, fetid, and sanguinolent. Pain was not proportionate to other symptoms; it was sometimes quite absent. The voice was dull and nasal. The false membrane had a strong tendency to spread to the larynx, and then, says Bretonneau, to pass into croup. In some cases the skin became coated with a similar exudation, especially the alæ nasi, backs of ears, the anus, vulva, and nipples, as also, blistered surfaces. The membranes from pharynx were often expectorated in considerable sized pieces. The pulse was usually small and weak, but little more frequent than natural; there were moderate thirst, and loss of appetite, sometimes diarrhœa, and less frequently vomiting. There were nearly always great prostration and lowness of spirits. The great danger of the disease arose from its spread to the air-passages. The disease sometimes proved fatal from prostration, but this mode of death was more rare than the former, according to Bretonneau and other French authors.

Some writers maintain that diphtherite is only a masked variety of scarlatina anginosa, while others believe the diseases are totally distinct. Others, again, think they have met with distinct cases of each disease, and have also seen cases of scarlatina complicated with diphtherite. Dr. Cormack thinks that it is a malignant herpetic eruption of the throat; and others say it is only a malignant form of quinsy. These differences of opinion as to the nature of the disease must, I believe, be in great measure ascribed to the fact that many of the observers have not met with cases of the genuine disease in a typical state, and have consequently formed erroneous conclusions founded on a partial experience, and from the presence of an epidemic of scarlatina anginosa, and cynanche maligna or scarlatinous angina at the same time.

Dr. Kingsford (*Lancet*, November 6, 1858) speaks of paralysis of the muscles of the neck, pharynx, and larynx, as a sequela to the severe form of diphtherite. He, however, appears to me to include in his description of the disease, cases of scarlatina anginosa. He also states that Dr. Gull informed him that he had met with a case in which the upper extremity was involved, and that he had himself just seen a lady recovering not only from loss of speech and deglutition, but also from partial blindness and paralysis of both arms, the result of this formidable complaint.

Dr. Semple, at the Medical Society of London, described some cases which he saw at Bagshot. He thinks they were very different from scarlatina. The onset was very insidious; and when advice was first sought, the pellicle had often reached the air-passages. Some died by asphyxia, but many more from exhaustion. It did not specially attack the puny and ill-fed, nor those living under unfavorable hygienic conditions.

Dr. Wade, of Birmingham, who has recently issued a pamphlet on the subject, considers that all the cases described by Fothergill and Huxham were the same as those described by Chomel, Bard, and more recently by Bretonneau; he does not consider that the circumstances that some of the cases were very similar to scarlet fever, and that the earlier cases were described as being attended with sloughing and ulceration, are enough to distinguish them.

Dr. Laycock, of Edinburgh, in a clinical lecture published May 29th, 1858, regards diphtherite as a disease produced by a fungous growth, *oïdium albicans*, the same that is found in thrush. He says: If the fungus multiply in a population at the same time that there is an epidemic of scarlatina or rubeola prevalent, that epidemic may be expected to take the diphtheritic form.

Regarding the nature of the false membrane affecting the throat in diphtheria, Dr. Harley * states that various and inappropriate names had been given to it, such as fibrinous, plastic, and fibro-plastic, all of which terms are very apt to mislead the mind as to its true nature. He had examined it in twelve cases, and found it to consist neither of fibrin nor fibro-plastic cells, but simply of the epithelium, mucus, and mucous cells proper to the part of the throat from which it came. When blood corpuscles were found in the exudation, their presence was due to some accidental abrasion of the mucous membrane. Pus-cells were also occasionally present, especially in those cases where ulcers had formed after the application of caustic. The false membrane, Dr. Harley believed, was composed of a hypersecretion of the ordinary mucus, and the presence of fungi upon it was due to some accidental circumstance. In the twelve cases he had examined, the *oïdium albicans* was absent in all except one; and even in that case the fungus did not grow upon the membrane until fifty-six hours after its removal from the patient. While speaking of the *leptothrix buccalis*, he related a very interesting case of diphtheria that occurred in University College Hospital. Several yellowish colored masses taken from the pharynx, œsophagus, and stomach, after death, when examined by the microscope, were thought by some experienced microscopic observers to contain numerous algæ. Dr. Harley pointed out to the Society, however, how he had been able to demonstrate that the supposed algæ were, in reality, crystals of fatty acids. But he did not mean to deny that algæ were sometimes found on the diphtheritic membrane; for, as they constantly occur upon the tongue and between the teeth of the most cleanly individuals, it is reasonable to suppose that they may occasionally attach themselves to the false membrane. What Dr. Harley wished to be understood to mean was, that neither fungi nor algæ were essentially components of the exudation, far less could they be regarded as constituting the disease. Diphtheria was, in his opinion, as much a blood disease as either small-pox or typhus, and the exudation on the throat was merely one of its characters.

Its Treatment.—Bouchut† teaches that, whether sporadic or epidemic its treatment is the same. The indication is the mechanical or chemical removal of the false membranes, and the prevention of their re-formation by the aid of contra-stimulant and anti-plastic remedies. The first of these is best fulfilled by the exhibition of emetics every or every other day. The membranes may also be destroyed by the hydrochloric acid, so much approved of by MM. Bretonneau and Trousseau, by nitric acid, nitrate of silver, and the actual cautery. Although these means are, no doubt, often of service, M. Bouchut does not resort to them ; but if he did, he would give the preference to the hydrochloric acid, rejecting the actual cautery as a barbarism. The means he employs is glycerine, which he finds to be a very efficient solvent of false membranes, when not too hard, and especially when they are muco-fibrinous, rather than fibrinous. There are great differences among these false membranes to be noted. Some are but slightly resisting, whitish, pultaceous, and formed of a soft exudation filled with muco-pus and granular bodies, in the midst of numerous epithelial cells, and almost destitute of fibrin ; others, which are more resisting, consist of a greyish albumino-fibrinous exudation, contain a little more fibrin than the former, and are easily torn. Others are entirely fibrinous, whitish, and tough, exhibiting under the microscope filiments of well-marked fibrin, amidst which a small quantity of epithelium and granular bodies are observed. Of these three varieties of false membranes, the first two readily dissolve in glycerine, while the last does so incompletely. These latter also become softer and less bulky, but they do not entirely disappear under the action of glycerine.

---

* *British Medical Journal*, Jan. 29, 1859.

† *Med. Times and Gaz. from Gaz. des Hôp.*

For the purpose of preventing the reproduction of the false membranes, various alteratives and specifics have been employed. Mercury, M. Bouchut believes, risks doing as much harm as good ; and he thinks better of divided doses of antimony, which, with proper precautions, may be given to children. Baron strongly recommends carbonate of soda or the Vichy waters, both as a preventive and a solvent agent, but from this M. Bouchut anticipates little. Chlorate of potassa, highly useful in ulcerative and gangrenous angina, giving rise to purulent or pultaceous products, and in stomatitis, has proved of no efficacy whatever in his hands in numerous cases of diphtherite and croup.

M. Pichenot states that during an epidemic at Censerey, Department of Coté-d'Or, the employment of emetics prior to the appearance of the membranes, the removal of these by alum, and then the repeated application of nitrate of silver, this treatment being combined with the use of tonics and strong broths, constituted an efficacious plan of management. Of 125 children, presenting all varieties of the disease, 77 recovered and 48 died.

M. Loisseau, of Montmartre, declares that during fifteen years that he has been in the habit of employing alum and tannin through the medium of laryngo-tracheal catheterism he has not lost a case.

M. Ollivier, of Ingrandes, states that during an epidemic of scarlatina with ulceration and couenneuse angine, the best results attended cauterizing the parts with his pure acid nitrate of mercury and the external employment of leeches.

Dr. Heslop,* in an article on the disease as it has lately appeared in England, strongly recommends the tincture of iron, which he regards almost as a specific. Dr. Camps, in a paper lately read before the Medical Society of London, considers that the general treatment should comprise the administration of the chlorate of potassa with chlorine, or a combination of cinchona bark or its alkaloid with the mineral acids. He adds: In severe cases calomel should be given in repeated doses until ptyalism is produced, and emetics, in the earlier stages, have been administered with good effect. The powers of the patient should be supported by wine, stout, beef tea, and other invigorating means.

---

* *Pacific Med. and Surg. Jour.*, September, 1858.

Dr. Hillier * says: It has been hastily concluded that mercurials are contra-indicated in the present epidemic. When the disease runs a rather slow course, and the air-passages are attacked by the extension of a tenacious false membrane from the pharynx, I should be disposed to employ calomel in small frequently-repeated doses, or mercurial inunction, not omitting stimulants, and even tonics, if the symptoms appeared to require them. We must be quite sure we are not dealing with a case of scarlatinal angina before we resort to mercury. The use of emetics may also be allowed in some cases. The tonics most to be recommended are bark and chlorate of potash, or hydrochloric acid. Should tracheotomy be ever employed? If dyspnœa is a marked symptom, and the signs of blood poisoning previously to the air-passages being involved were not very marked, I should advise its employment, though not with any great confidence of its doing good.

Dr. Laycock † says: I may observe, that antiseptics and parasiticides appear to be the most efficient remedies in diphtheria. I can speak very favorably of the value of the tincture of the sesquichloride of iron (an antiseptic) and hydrochlorate of potassa. The latter, taken alone, will sweep away the pellicle in a few hours. Hydrochloric acid is also useful. Borax, which is so efficient in mugnet, would probably be serviceable in diphtheria. And, I may say, that I have found a concentrated solution of borax as useful a local application in favus as any that I have tried. It is also serviceable in certain forms of lepra, applied externally, and, I believe, from its action as a destructive parasiticide. There are other remedies of this class, as the linimentum æruginis, the chloride of zinc, chloride of lime, etc. Early blood-medication is far the best treatment, inasmuch as local applications, like the nitrate of silver, cannot have any effect on the air-passages, where the greatest mischief is done. Calomel and blisters seem wholly contra-indicated; indeed, the latter must be considered far more likely to be hurtful than beneficial. Wine, in moderation, is likely to be useful, and makes an excellent gargle diluted one-half.

Mr. Stiles ‡ says: I have prescribed twenty minims of the tr. ferri mur., with the same quantity of tincture of columba, in water, to be taken three times a day, and the frequent use of a gargle containing a drachm and a half of Beaufoy's solution to eight ounces of water. And I have also recommended that a portion of the gargle may be allowed to pass down the throat, as I quite agree with Mr. Davey, that the putrid fluid which is swallowed is one of the chief sources of danger. I apply Beaufoy's concentrated solution by means of a sponge probang, six or eight inches in length, which affords a fair opportunity of sufficiently mopping the pharynx and parts over the base of the tongue and epiglottis, to prevent the extension of the exudation to the larynx.

---

* *Med. Times and Gaz.*, Feb. 12, 1859. † *London Lancet.*

‡ *British Medical Journal*, January 8, 1859.

Mr. Alford * says: Having had several cases of diphtheria, I tried a gargle of chlorinated soda, of the strength of from half a drachm to a drachm in an ounce of water, to be used every ten or fifteen minutes, so as to wash away, and *keep washed* away, the morbid growth, and, by the constant application of the chlorine contained in the gargle, destroy the poisonous character of the disease. When this plan is persevered in, the white fungi and jelly-like mass are washed away; and the throat is kept free by constant gargling. I believe the chlorine itself not only counteracts the poisonous nature of the morbid secretion, and destroys its deleterious character, but also has a beneficial effect on the system at large; and again, by destroying the virus, prevents its spreading to other members of the family.

Mr. Hodson * used chlorine by inhalation in a bad case with good results: I then proposed trying the effects of inhalation of the vapor of boiling water, mixed with a portion of solution of chlorinated lime. A very serviceable vapor-bath was thus extemporized. An earthen milk-pan was placed on the bed close to the child; above this a large open umbrella; shawls and a piece of drugget were thrown over, hanging down to the bed so as to inclose the child and milk-pan completely; the latter was then half filled with boiling water; and, lastly, a few spoonsful of the chlorinated solution were added. After a few minutes the exudation became looser, and at the end of ten minutes, when the coverings were removed, the breathing was much freer. I directed this vapor-bath to be repeated every three hours, and occasionally a large sponge, dipped in boiling water, with a little of the solution sprinkled on it, held beneath the mouth and nose. For two days this plan was steadily pursued, and excepting for a few hours, the improvement was uniformly progressive.

Dr. Perry speaks favorably of turpentine as a remedy in diphtheria: I rub up ʒij. of the spr. terebinth. with the yelk of an egg, and add enough syrup to make a ʒxij. mixture. One tea spoonful in milk every two hours. Then dissolve ʒj. of the ammon. carb. in ʒxij. of water, and give one tea spoonful every two hours also in milk. Besides this the child takes port-wine, porter, and beef-tea, or wine with the yelk of egg *ad lib.* I have not found in any of my cases strangury caused by the turpentine. The patient dislikes it of course, and it requires a determined and attentive nurse; but I have found the plan very successful, and I speak of those cases where decided croupy breathing and fits of suffocation have made their appearance.

Dr. Blake,† of California, who has had much experience in this affection, thus gives his treatment:

The medicines I generally have recourse to are the chlorate of potash combined with the spirit mindereri when there are feverish symptoms, and with quinine, or tincture of bark when the pulse becomes too soft. How the chlorate acts in this disease I cannot tell. It might be merely by its aid as an antiseptic, neutralizing the secretions that have found their way into the stomach from the throat, or it might exert an analogous action on the poison in the blood; or it possibly might be inert, the patient getting well merely *post*, and not *propter hoc;* however, I think at least as an antiseptic we are justified in giving it. The dose should be from five grains to a scruple every two or three hours, or less frequently when the symptoms are not severe. I am also in the habit of prescribing considerable quantities of charcoal with a view of neutralizing the fœtid secretions that must find their way into the stomach.

---

* *British Medical Journal*, January 8, 1859.

† *Pacific Med. and Surg. Jour.*, September, 1858.

CORRESPONDENCE.

Death and almost entire absorption of a fœtus of six months' development.—By E. J. FOUNTAIN, M.D., Davenport, Iowa.—The following history will furnish a hint for a diagnosis in any similar case which may hereafter occur, and throw some light upon those rare and obscure cases of placental absorption, concerning which there has been so much difference of opinion. To me the nature of this case until its final termination was a mystery. The patient, whose recent condition has furnished the following report, is a lady of intelligence and refinement, and is the mother of several healthy children. She became pregnant, as she supposed, in the month of June. The symptoms were well marked, and the same as she had formerly experienced under like circumstances. She began to feel motion at about the usual time, and the enlargement of her person continued at the same rate as formerly, until about the first of December. At this period she felt slightly indisposed for a number of days, but not sick enough to take her bed or ask for medical aid. From this time her enlargement ceased advancing, but she continued to feel something like motion as before. Her health was excellent; better, she thought, than usual. During the winter she fancied she was growing smaller; and this opinion, at first a suspicion only, became confirmed before spring by positive evidence of diminished size of the abdomen. This diminution continued going on, but still she thought she felt motion as formerly, but always light. I was first consulted in reference to the case in the month of April, after the time when she expected to have been confined. Her appearance did not in the least indicate that she was pregnant, but on examination I found a very slight but tolerably well-defined enlargement of the hypogastric region. An examination per vagina revealed an increased size of the neck of the uterus, and its weight indicated some enlargement of the body itself. From a careful examination I concluded the uterus could not be quite as large as the head of a child of ordinary size at birth. The lady felt a great anxiety to know the real character of her situation, but I had to confess that I could not determine in my own mind what it might be. She was certain that she felt motion every day, yet here was the uterus too small to contain a living fœtus of nine or even six months, and it was still constantly diminishing in size! Gestation had advanced regularly up to the sixth month, and then appeared gradually to recede, until at the time when she should have been delivered her figure differed but little from its natural appearance, and what remained of the enlargement was constantly diminishing In the meantime, there had been no discharge from the uterus of any kind, and she had suffered none but a slight temporary interruption to her usual good health. The case was a complete puzzle to me; and although various conjectures were made to explain her anomalous situation, they were all quite unsatisfactory to myself. I acknowledged to her that the case appeared a mystery that I could not understand; but as her general health was good, I thought there was no occasion for any active interference. Whatever might be the contents of the uterus, it was evident they were gradually being absorbed without injury to her constitution; and I concluded it would be time enough to interfere when any change in her condition would seem to require it. It is hardly necessary to say that I referred the motion which she supposed she felt entirely to her imagination, or to some sensation which she had mistaken for the movements of a living child. A few days after this she began to feel some pain in the back, and her appetite and general health was somewhat impaired. She became nervously anxious about her situation, and was much disturbed by unpleasant dreams at night. In the absence of any knowledge of the nature of her condition, her imagination naturally furnished all manner of fancies which were calculated to excite her fears and depress her spirits. She still thought she felt motion, but never at any time had any symptom of labor pains. This was her situation on the 11th of May, eleven months from the commencement of gestation, when I determined to examine the uterus by the aid of the speculum, to explore its contents as far as possible, and endeavor to excite uterine action for the expulsion of whatever it might contain. I first passed into the neck a small silver catheter. This entered about half or three quarters of an inch, when its passage was resisted by some firm but slightly elastic obstacle. I then introduced a small and pointed injecting tube, perforated with a number of small openings at its extremity, and injected a small quantity of aqueous solution of iodine and iodide of potassium. The operation was attended with but very little pain, and I left her with directions to remain quiet and wait for the result. In about an hour labor pains commenced and continued regularly until I was called, which was about four hours after the operation. This method of exciting labor pains was entirely experimental on my part, and resulted in the effect desired with far more promptness than I anticipated. On examination, I found a membranous bag filled with a tolerably firm substance presenting in the upper portion of the vagina. As the pains were light, I administered ergot; stronger pains followed in about fifteen minutes, and soon my hand received the expelled mass in unbroken form and without a drop of blood. It was the remains of a fœtus enveloped in its membranes unbroken, with the placenta attached. The placenta was very hard, evidently much compressed and reduced in substance, and partly rolled upon itself. The contents of the sac appeared almost solid, and of a dark color. The whole mass was so small that it scarcely filled the hollow of one hand. A very slight flow of blood followed after a little while, and afterpains continued during the night. The patient's convalescence was quite rapid. No lacteal secretion was established, nor had her breasts enlarged in the least. On opening the sac at my office on the following day, I found it contained the greatly compressed and emaciated form of a fœtus. The flesh had been almost entirely absorbed, leaving little more than a skeleton, partially covered with a thin remnant of muscular tissue, and surrounded with a small quantity of an opaque yellowish liquid, of purulent consistence, but quite free from odor. The bones of the head were crowded over and under each other; the body and limbs were doubled up, and the whole compressed, with the placenta, into a small compact ball. Upon unfolding it, the skeleton was found to be entire in substance, and measured ten inches in length, without unlocking the bones of the head.

From the history of this case it is evident that the fœtus had been regularly developed, and reached its normal size and condition until at or near the sixth month of gestation; and that at this period the death of the fœtus had occurred from some unknown cause, and absorption of the contents of the uterus began and continued from this time up to the period of delivery. It is an interesting fact that this dead child should have been carried so long, about five months, without exciting uterine action. How much longer it would have remained had there been no interference, it is of course impossible to know; but it is certain that there had been no symptoms of any disposition on the part of the uterus to expel the fœtus. Still more remarkable is the fact that so great an amount of absorption had taken place from the uterine cavity. The size of the patient, and the appearance and condition of the bones of the child, with other particulars stated, furnish evidence that the uterus had contained a living child of usual proportions at six months, and that all but the skeleton of this child, together with the placenta, membranes, etc., had been absorbed to such an extent that the whole mass which was finally expelled was not larger in bulk than a good sized orange. With this case before us, we may readily believe that the entire absorption of a placenta is a possibility, and that it is more than probable that such an occurrence now and then does take place is established by undoubted evidence of a few cases of this kind, of which fact I am personally assured by Dr. C. R. Gilman, Professor of Obstetrics in the College of Physicians and Surgeons of New York.

Uræmic convulsions following scarlatina—Recovery.—By RALPH N. ISHAM, M.D., Chicago, Ill.—Hans Pritz, Norway, aged 8 years, was attacked with scarlatina simplex, December 12th, 1858, at the same time suffering from whooping cough. His recovery from the former after the fourteenth day seemed to be tardy. Symptoms of hectic set in, and he became very weak; upon the least exertion, large drops of perspiration would break out upon the forehead and elsewhere. Changes in the urine were now noticed, following desquamation, being at first of a dark-brown color, turbid and containing blood; it changed to a cloudy amber, containing albumen and some epithelium, with crystals of uric acid, under the microscope. Urine scanty and frequently passed; no tenderness over lumbar regions; some œdema of eyedids, upper lip and lower extremities, appetite good, bowels regular, still harassed with cough.

Thursday, January 20th, 1859.—Has steadily improved; has been sitting up nearly all day; complains of some pain in the chest and back; very little œdema; urine scanty and still albuminous, little cough.

At 5½ this evening his mother placed him in bed, and shortly afterwards noticed an unusual change in his look. He made no replies to questions; the eyes were prominent and fixed in a vacant upward stare, with pupils dilated and head partially thrown back, and rigidity of limbs. This condition lasted about half an hour, and I arrived at the house whilst the patient was in the first convulsion which succeeded this state. He was insensible; face and neck swollen; of a dark color; eyelids wide open, with rapid twitchings; eyebrows prominent and turned upwards; pupils largely dilated; conjunctiva injected; frothy saliva issuing from the mouth, the latter open, distorted to the right side and convulsed, as also all the muscles of the face; head drawn back and body rigid; jerking convulsions of the extremities; hands alternately open and clenched; right side of body mostly affected; respiration short, rapid, thoracic, and accompanied with a hissing noise and occasional moan or cry. Urine passed involuntarily; no vomiting; skin covered with perspiration; temperature reduced; pulse small and too frequent to be counted.

This first convulsion lasted about twenty minutes, leaving the patient in a state of rigid coma, or as the mother describes it, similar to the appearance of the patient immediately before the attack. The second convulsion succeeded the first in a very few minutes, but the intervals became much longer after each convulsion. Whole number of convulsions, 8. A glass rod, dipped in hydrochloric acid and held to the breath, gave evidences of the presence of ammonia in the expired air.

Treatment.—Wine of colchicum was given in ten drop doses to the extent of two drachms during the night; irritation over the region of kidneys; blisters to nape of neck and sinapisms.

Friday morning, 21*st*.—Boy is weak; temperature diminished; covered with perspiration; has passed quantities of urine, but involuntarily; is conscious, but unwilling to converse; is occasionally a little delirious; has slept none; pulse small, and 110.

Saturday, 22*d*.—Has good appetite; an unnatural brilliancy of the eye and wildness of expression; ordered a renewal of irritation to nape of neck; resort again to colchicum.

Saturday evening. Boy has slept a couple of hours, the first since the convulsions; says he "feels better;" urine has been freely passed, but upon cloths, so that I had no opportunity to examine it. 25th.—Patient is unusually well to-day; his habits are all regular. His mother says his appetite is ravenous; has a small red sore over right ischium; is troubled with several ugly boils. Urine examined (first since convulsions) is clear, of amber color, non-albuminous, sp. gr. 1.010.

Tuesday, Feb. 1*st*.—Patient has again manifested some symptoms indicating a return of the convulsions; a dilatation of pupils, fixed eyes, tremor, and convulsion of fingers; the urine is also albuminous and contains blood; colchicum renewed. The patient is also covered with boils—eleven I counted upon the chest; some of them being opened gave exit to a very dark, bloody and offensive pus. From this date, with exception of some irritation of the bowels, he steadily convalesced, and to-day, February 12th, is well.

The above case affords some ground for the supposition that colchicum may prove a valuable remedy in cases where urea in the circulation produces convulsions and coma. This remedy alone, above all others, possesses the property of increasing the quantity of urea in the urine in a marked manner, and I regret that in this case I was unable to show its exact effect upon the urinary secretions, whilst the patient was under its influence. Although long since satisfied of the propriety of its use, and being determined to resort to it upon the first opportunity which presented; I was unaware that it had been administered in such cases, until I saw an article a few days since written by Dr. Maclagan of Edinburgh, who has used it in cases of dropsy succeeding scarlatina, when the urine had been much suppressed with comatose symptoms with the happiest results. He says: "I believe that in all cases where albumen and urea appear to be vicarious, and when coma supervenes, evidently from the latter principle in the blood, that colchicum will prove to others of as great service as it already has done in the small experience I have had of it."

This case is interesting, also, from the fact that it comprises some observations of Frerich's, that in uræmic convulsions, carb. of ammonia is present in the expired air, being converted from urea by some ferment yet unknown. The sudden appearance of boils upon the patient is an interesting phenomenon, undoubtedly connected with the blood poison.

Inhalation of oxygen as a remedy in obstructed respiration.—By A. H. SMITH, M.D.—Permit me, through the medium of the *Journal of Medicine*, to make known to the profession the result of a series of experiments which I have lately made with regard to the inhalation of oxygen gas in cases of obstructed respiration. The idea of compensating for the deficiency of air admitted to the lungs under such circumstances, by increasing the proportion of oxygen contained in the limited quantity which finds access to them, first occurred to me during the winter of 1856–7. Circumstances, however, prevented my testing its value by experiment until the early part of November of the past year. Having, then, leisure for the first time since my arrival in Europe, I determined to make some experiments with regard to this point, my attention having been forcibly called to it anew by a case of croup which occurred on board the steamer in which I came from New York.

I adopted the following as the most convenient means which suggested itself to my mind for imitating in an animal the condition which is observed in the human subject in cases of croup, spasmodic asthma, foreign bodies in the trachea, etc. A glass tube three-eighths in diameter and eight inches long, was draw out to a somewhat smaller diameter at one end, and furnished with a groove around it near the extremity for the purpose of retaining the ligature hereafter to be mentioned. The other end was drawn out to a diameter of rather less than half a line. Tracheotomy was now performed on a rabbit, and the large end of the tube introduced into the trachea from above downwards, and secured by passing a ligature around the trachea immediately below the wound, and at a point corresponding to the groove on the tube. By this arrangement no air could pass into the lungs except through the tube, that is to say, through an orifice less than half a line in diameter. The free end of the tube was introduced in flasks containing oxygen mixed in various proportions with common air.

My first experiments, though encouraging on the whole, gave no definite results, owing to my not having learned to apportion properly the amount of oxygen. I observed, however, that the congestion of the ears, which immediately took place on tightening the ligature, disappeared almost instantly when the tube was introduced into the gas.

In the last experiment the tube was drawn to a diameter of about one-third of a line, and instead of proceeding as before, I merely brought the end of the tube into a stream of pure gas, thus avoiding the intermixture of carbonic acid with the oxygen. The first few inspirations were of a convulsive character, but after the lapse of one or two minutes the respiration became perfectly regular and quite easy, falling, however, from eighty, the number before the ligature was applied to the treachea, to thirty-two, at which figure it remained with slight variations during the whole of the experiment, the animal appearing to adapt the respiratory efforts to the amount of oxygen received into the lungs. After twenty minutes the supply of oxygen was exhausted, and although up to that time the animal had appeared perfectly easy, still after the supply ceased and before the ligature could be cut and the tube removed, respiration had ceased. By means of artificial inflation of the lungs, however, it was restored, and in the course of half an hour the animal appeared entirely well with the exception of the presence of some blood in the trachea, owing to hemorrhage from the wound.

The same tube was then secured in the same manner in the trachea of another rabbit, and the oxygen withheld. In two minutes after the tightening of the ligature respiration had ceased, and although by the means used in the former case it was again restored, still it was evident that even in this short time the system had suffered severely, and it was several hours before the animal recovered that degree of vigor which the other possessed within half an hour after the termination of the experiment.

It is true that the experiments to be entirely satisfactory should have been continued for a longer period, but still the results are sufficiently striking to lead me to hope that the idea may be developed into an important improvement in the treatment of cases of dyspnœa. Situated as I am here it will be impossible for me to pursue the matter further at present, and I send these imperfect results merely with the hope that some one in America who has leisure and opportunity will repeat, and add to my experiments.

That the inhalation of oxygen is a means to be resorted to with caution there can be no doubt. Still in the human subject I think it would not be difficult to apportion the amount to the necessity of the case. Beside the sensations of the patient (which it might not always be easy to ascertain), the pulse would afford a guide, and the mere regulation of the supply would be a very simple matter. Inflammation would not be feared so long as the whole amount of oxygen inhaled was not permitted to exceed that in normal respiration.

Particularly in croup, advantage from the use of this means might be expected. When applied early and so managed as to keep pace with the progress of the disease, I should hope that the violent respiratory efforts, which so surely result in œdema of the lungs, might be avoided, so that we would have to contend only with the local inflammation in the trachea and larger bronchial tubes. So long as the air passages were capable of carrying but one-fifth of the usual volume at each respiration, the normal amount of the aërating principle might still be afforded to the lungs. But, under ordinary circumstances long before the calibre of the tubes had become reduced in this proportion, death would have taken place. Time would thus be gained for the appliance of other remedies, or the inflammatory process might reach, and pass, its point of greatest intensity while the powers of life were yet sufficiently vigorous to effect the expulsion of the membrane.

A case of chronic poisoning with chloroform which occurred a few days since, under my observation in a patient of Professor Langenbeck of this city, and in which the autopsy revealed an almost tarry condition of the blood, suggests the inquiry whether the inhalation of oxygen might not be beneficial in such cases. In this case death took place forty-eight hours after the inhalation of the chloroform, so that abundance of time was allowed.

Berlin (Prussia), January 25th, 1859.

EDITORIAL.

Re-interment of the remains of John Hunter.—The coffin of John Hunter was recently discovered in the disinterment of bodies from St. Martin-in-the-Fields, and buried in Westminster Abbey. The *Medical Times and Gazette* gives the following interesting sketch of the ceremonies on that occasion :

> "As public notice had been given that the re-interment would take place in the Abbey on Monday after the afternoon service, and that an appropriate anthem would be given, an unusually large congregation had assembled, and great numbers of medical men attended in addition to those who had obtained tickets at the College. There was no funeral service, but the words of the anthem were peculiarly appropriate : 'When the ear heard him, then it blessed him ; when the eye saw him it gave witness to him ; he delivered the poor that crieth, the fatherless, and him that hath none to help him. . . . His body is buried in peace ; his name liveth evermore.' While the service was proceeding, the Council of the College and many gentlemen invited to join in the ceremony, assembled in the Jerusalem Chamber, the room in which Henry the Fourth died, after having been brought there from the Confessor's Shrine in the Abbey in a fit of apoplexy. There were those present who recalled the words of the dying king, as embalmed by Shakspeare in his historical play, and of Congreve and Addison lying in state

in the same room before their interment in the Abbey so well described by Goldsmith as 'the place of sepulture for the philosophers, heroes, and kings of England'—and there was a general feeling of pride on the occasion of adding the remains of one of England's greatest medical philosophers to the dust of his fellows; especially as our profession is not rich in associations with Westminster Abbey. Mead, Friend, and Baillie—with the exception of Buchan, of 'Domestic Medicine' renown—were the only medical men, before Hunter, entombed within its precincts. When the service was over the procession was thus arranged, following the coffin, which was carried on a high bier: The Dean of Westminster; Mr. Baillie, a grand nephew of Hunter; the Earl of Ducie, and Dr. Clarke, of Cambridge, as trustees of the Hunterian Museum; Mr. Buckland and Professor Owen; the Presidents of the Colleges of Physicians and Surgeons, the Council and Professors of the College of Surgeons, the Censors of the College of Physicians, the Master and Warden of the Apothecaries' Company, the Presidents of several of the learned Societies, the Medical Officers of London and Provincial Hospitals, and many visitors. While the dead march in Saul resounded from the organ, the procession proceeded round the Abbey, through lines of spectators, and returned to a grave opened on the north side of the nave, near the western end. Here the coffin was lowered amid a great concourse, and many present obtained their first glimpse of it. It was extremely well preserved. On a brass plate, with the family arms, was inscribed, 'John Hunter, Esq., died 16th October, 1793, aged 64 years.' Beneath this plate the College had had another affixed, with the inscription, 'These remains were removed from the Church of St. Martin-in-the-Fields, by the Royal College of Surgeons of England, March 21st, 1859.' In opening the grave for Hunter, the bones of Ben Jonson were exposed, and a skull was freely handled about, said to be that of 'Rare Ben;' but we did not learn that the truth of the story of the poet being buried standing on his feet was confirmed. However this may be, the Poet and the great Surgeon, Physiologist, and Naturalist rest at last side by side, close to Gifford, who rescued Jonson's memory from unmerited obloquy, and another is added to the rich associations of our National Mausoleum. In its aisles and chapels sleep our kings and queens. Elizabeth in the same sepulchre with her victim the Scottish Mary; the descendants of Robert Bruce by the side of the first Edward; Pitt within a yard of Fox.

"'How peaceful and how powerful is the grave
Which hushes all!'"

St. Luke's Hospital.—This new hospital, which has recently been erected in the upper part of the city, occupies the block between 54th and 55th streets, from 5th half way to 6th Avenue, within three blocks of the Central Park, and upon some of the highest ground on the island. This situation has been admirably chosen for the erection of a hospital, and the building itself, in its architectural beauty, is an ornament to the city. The hospital consists of a main building, and two wings, each 150 feet in length. It can accommodate 200 patients. The medical and surgical staff has recently been filled, and consists of the following gentlemen: *Attending Physicians*—Drs. Alonzo Clark, C. F. Heywood, T. G. Thomas and W. H. Draper; *Attending Surgeons*—Drs. Gurdon Buck, Geo. A. Peters and F. J. Bumstead; *Pathological Chemist*—Dr. John C. Dalton, Jr.; *Consulting Physicians*—Drs. Ed. Delafield, Geo. P. Cammann, Benj. Ogden and J. T. Metcalfe; *Consulting Surgeons*—Drs. Willard Parker, John Watson, A. C. Post and D. L. Eigenbrodt.

Officers of the New York Sanitary Association.—*President*—Frederick E. Mather; *First Vice-President*—John H. Griscom, M.D.; *Second Vice-President*—Robert B. Minturn; *Corresponding Secretary*—Elisha Harris, M.D.; *Recording Secretary*—C. R. Agnew, M.D.; *Treasurer*—Chas. M. Elliot. Members of the council are as follows: John Watson, M.D., Alfred C. Post, M.D., John Torrey, M D., Peter Cooper, E. L. Viele, C. C. Savage, Joseph M. Smith, M.D., E. R. Peaslee, M.D., Stephen Smith, M.D., Wilson G. Hunt Prosper M. Wetmore and Benjamin R. Winthrop.

Quarantine and Sanitary Convention.—The third annual meeting of the *National Quarantine and Sanitary Convention* will be held in this city on Wednesday, the 27th inst., at 10 o'clock, A.M. It will be recollected that this annual gathering of representatives from Boards of Health and Medical Associations is the continuation and fruits of an effort that was put forth by the Philadelphia Board of Health in 1856–7. The first meeting was called by Dr. Jewell, president of that board, and convened at Philadelphia in May, 1857; the second convened last year at Baltimore.

New York Preparatory School of Medicine.—This school has been incorporated by an act of the legislature.

PUBLICATIONS RECEIVED.

Taylor (Alfred Swayne.) On Poisons in relation to Medical Jurisprudence and Medicine. Second American from second and revised London edition. Philadelphia: Blanchard & Lea, 1859.

Vidal (A.) A Treatise on Venereal Diseases, with colored plates. Translated by George C. Blackman, M.D. Third edition. New York: S. S. & W. Wood, 1859.

Sanger (William W.) The History of Prostitution: Its Extent, Causes, and Effects throughout the world. (Being an official report to the Board of Alms-House Governors of the City of New York.) New York: Harper & Brothers, 1859.

Whitehead (James) Third Report of the Clinical Hospital, Manchester. London: Churchill, 1859.

Oliver (Fitch Edward) Extracts from the Records of the Boston Society for Medical Improvement. Vol. 3. Boston: 1859.

Pamphlets.—Sixteenth Report to the Legislature of Massachusetts, relating to the Registry and Return of Births, Marriages, and Deaths, in the Commonwealth, for the year ending December 31, 1857. By Oliver Warner, Secretary of the Commonwealth. Boston: 1858.—Sixth Annual Report to the General Assembly of Kentucky, relating to the Registry and Returns of Births, Marriages, and Deaths, in the State of Kentucky, from January 1st, to December 31st, 1857. Frankfort, Ky.: 1858. (From Dr. W. L. Sutton.)—The Progress and the Spirit of Medical Science. An Anniversary Discourse, delivered before the New York Academy of Medicine. Nov. 25, 1858. By E. R. Peaslee, A.M., M.D. New York: 1859.—Valedictory Address to the Graduating Class of the Philadelphia College of Medicine, at the Annual Commencement, March 2d, 1859. By J. Aitken Meigs, M.D. Philadelphia: 1859.—New York Hospital. Report of the Committee of the Board of Governors, appointed to inquire into the practicability of extending the usefulness of the Hospital. New York: 1858.—Report of the State of the New York Hospital and Bloomingdale Asylum, for the year 1858. New York: 1859.—State University of Michigan. A Catalogue of the Officers and Students, for 1859. Ann Arbor: 1859.—Annual Report of Board of Directors of the German Dispensary of the City of New York, for the year 1858. New York: 1859.—Annual Report of the Officers of the New Jersey State Lunatic Asylum, at Trenton, for the year 1858. Trenton: 1859.—Sixteenth Annual Report of the Managers of the New York State Lunatic Asylum. Transmitted to the Legislature, Jan. 29, 1859. Utica: 1859.—Journal of the American Geographical and Statistical Society, January and February. Published by the Society. New York: 1859.

INDEX TO VOL. VI.

NEW SERIES.

PAGE

Abscess, surface of brain..... 247, 249
Abscess, extensive fœcal......... 390
Address, Batchelder's inaugural... 278
Agnew, extirpation of eye........ 67
Air-passages, diseases of.......... 276
Alkalies, effects on narcotics...... 399
Am. Pharmaceutical Assoc'n...... 135
Am. Med. Assoc., transactions of.. 274
Am. Med. Association, meeting of. 426
Amputation, primary of arm...... 242
Amput'n, healing by first intention. 18
Amputation, two cases of......... 387
Anatomy, pathological, notice of... 275
Anatomy, Wilson's work on....... 277
Aneurism, arterio-venous, case of.. 398
Aneurism, cured by compres'n..75, 391
Aneurism, ligature of femoral for.. 386
Apoplexy, in pregnancy.......... 25
Apparatus, Burge's, for thigh..... 365
Aran, treatment of uterine diseases. 137
Arm, amputation of, for fracture... 242
Army, statistical report of........ 253
Artery, ligature of temporal....... 398
Artery, wound of carotid......... 248
Articulation. nature of false....... 373
Asarum canadense in dropsy...... 289
Auditory canal, sponge tent in.... 311
Ayres on exstrophy of bladder.... 280

Batchelder on compressed sponge.. 301
Bauer on hip-joint disease........ 39
Bauer, resection of caput femoris... 95
Bazin, lectures on scrofula........ 126
Becquerel, neuralgia of uterus..... 284
Bellevue Hospital, reports of... 85, 244
Bellevue Hospital, prizes in....... 291
Belladonna, effect of alkalies on.... 399
Bigelow on rational medicine...... 134
Birkett, polypus of bladder....... 401
Bladder, case of polypus in....... 401
Bladder opening into intestines.... 401
Black on asarum canadense....... 289
Blair, vicarious menstruation...... 281
Blumenthal, laws of Hebrews...... 339
Bones, on the development of..... 114
Bouvier, clinical lectures......... 111

PAGE

Brain, concussion of the.......... 93
Brain, abscess of.............247, 249
Brooklyn City Hospital report.... 88
Brown, notice of work by......... 108
Brower, cases of ovarian dropsy... 139
Buck, case of tracheotomy........ 11
Buck's treat't of fractures of thigh. 238
Buck, case of trephining.......... 243
Bumstead, rep. of Eye Infirm...186, 358
Burge, fracture of thigh.......... 365
Burge's apparatus, notice of........385
Byford on muscular exercise...... 280

Cancer, compressed sponge in..... 314
Cancer, diagnosis of surgical...... 132
Carotid artery, wound of.......... 248
Carnochan's contribut's to surg'y.. 277
Carunculæ myrtiformes, nature of.. 216
Cataract, operation by extraction . 363
Caustics, injections into uterus.... 331
Cellular tissues, serous fluid in..... 94
Chest, examination of............ 159
Children, disease of.............. 125
Cholera infantum, autopsies in..... 61
Clark, case of pneumothorax...... 20
Clark, treatment of diabetes...... 22
Clark, rupture of the uterus....... 29
Cock, puerperal uræmia.......... 28
Coe on organic medicines......... 135
Compression in aneurism...... 75, 391
Conjunctivitis, simple............ 188
Conjunctivitis, purulent........... 189
Conjunctivitis, strumous and pustul. 191
Corson, management of shoulders.. 159
Cornea, vascular state of.......... 192
Correspondence. general 141, 285
Coulson, hydatids of the tibia..... 401
Cunningham's Hospital report..... 88
Curvatures of body.............. 126

Death of Samuel S. Whitney...... 291
Decidua in tubal gestation..... . 400
Detmold, wound of carotid........ 248
Diabetes, new treatment of....... 22
Diday, doctrines of syphilis....... 124
Diphtheria, its early history 411

PAGE
Diphtheria, its true nature........ 412
Diphtheria, its treatment...... ... 414
Diseases of air-passages........... 276
Dislocation of both elbows........ 18
Dislocation of femur reduced...... 84
Dislocation of humerus upward.... 401
Dropsy, asarum canadense in...... 89
Dubois, case of puerperal fever.... 26
Duer, curvatures of body......... 126

Ear, hemorrhage from the........ 93
Elbows, dislocation of both....... 18
Elliot, case of ovarian tumor....... 31
Emphysema, from perforation..... 20
Epilepsy, pathology and treatm't... 136
Erichsen, notice of surgery....... 276
Etherization, review of work on.... 265
Eulogy on Magendie............. 257
Excrements, analysis of human.... 400
Excision of knee, cases of........ 401
Exsection of half of lower jaw... 32, 84
Exsection of head of femur 85
Eye, effect of sympathetic nerve on. 401
Eye, excision of globe............ 359
Eye, extirpation of............... 67
Eye Infirmary, report of..... 186, 358
Eye, classification of diseases of... 186
Eye, extirpation of for cancer..... 243

Femur, cases of fracture of........ 365
Femur, dislocation of reduced..... 84
Femur, exsection of head of....... 85
Femur, fracture above condyles.... 95
Femur, necrosis of portion........ 36
Femur, resection of head...... 95, 101
Femur, diastasis of head.......... 100
Femur, rheumatic periostitis....... 101
Fever, on the etiology of......... 401
Fistulæ, vesico-vaginal and uterine. 139
Fistula in ano, sponge tent in..... 306
Fistulæ, cases of gastro-cutaneous.. 398
Fœtal malformation, case of....... 392
Forbes on nature and art......... 134
Fountain, absorption of fœtus...... 418
Fountain, case of aneurism........ 75
Fox, gland'r structures of stomach. 401
Fractures, ununited, lecture on.... 371
Fractures, ligamentous union in... 372
Fractures, fibrous bands.......... 372
Fractures, non-union of.......... 371
Fractures, defor'ty in non-union of. 374
Fractures, mobility in non-union... 374
Fractures, limb in non-union of.... 375
Fractures, causes of non-union of.. 376
Fractures, treatment of ununited... 381
Fractures, notice of Malgaigne.... 408
Fractures of thigh, treatment of... 238
Fractures of the vertebræ......... 244
Fracture and luxation of vertebræ.. 244
Francis' introductory discourse.... 280

PAGE
Friedberg on muscular paralysis... 120
Friedleben on thymus gland....... 129
Funis, morphology of............ 122

Gairdner, medical education....... 134
Galvanism, effect on the uterus ... 400
Garrod, researches on gout....... 401
Garrod, therapeutic communicat's.. 399
Gastro-colic fistula, notice of work. 280
Geddings, lectures on surgery...... 275
Glaucoma, morbid anatomy of..... 399
Glands, removal of salivary....... 32
Gout, researches on the.......... 401
Green, selected prescriptions...... 135
Green, diseases of air-passages..... 276
Green, review of memoirs......... 256
Gross on pathological anatomy.... 275
Gun-shot wound of orbit.......... 88
Gun-shot wound of vertebræ...... 89

Hæmostatic, compressed sponge as. 325
Hæmostatic, persulphate of iron... 148
Hæmaturia, case of........ 24
Halsted, perineal section.......... 386
Halsted, ligature of femoral....... 386
Halsted, cerebral apoplexy........ 25
Halsted, extirpation of eye........ 243
Hawkins, case of lithotrity........ 401
Heart, malformations of.......... 122
Hebrews, on the laws of.......... 339
Hemorrhoids, sponge tent in...... 312
Hemorrhage from ear in concussion. 93
Hemorrhage, case of post-partum.. 29
Hernia, case of radical cure....... 36
Hernia, case of strangulated....... 241
Herzka on respiratory sounds...... 220
Hewit, high operation for stone.... 217
Hip-joint disease, lecture on....... 39
Hip disease, stiffness of joint...... 40
Hip disease, malposition of leg.... 40
Hip disease, attenuation of leg.... 42
Hip disease, peculiar pain in.. 43
Hip disease, differential diagnosis.. 49
Hip disease, etiology of 51
Hip disease, prognosis of......... 52
Hip disease, treatment of.......... 53
Hip-joint disease, cases of......... 95
Hip-joint, synovitis of..98, 101, 102, 103
Holmes, case of dislocation....... 401
Hood, treatment of scarlet fever... 111
Hulke, anatomy of glaucoma....... 399
Humphrey, excision of the knee... 401
Humerus, dislocation upward...... 401
Hunter, notice of, on venereal..... 409
Huschke on thickened skulls...... 115
Hydatids of tybia, case of......... 401
Hymen, Thomas' essay on......... 196
Hymen, origin of the term... 197
Hymen, literature of 197
Hymen, anatomy of............. 200

PAGE

Hymen, physiology and uses...... 201
Hymen, superstitions regarding.... 203
Hymen, medico-legal relations,.... 205
Hymen, diseases of...... 207
Hymen, persistence of........... 215
Hymen as a sign of virginity...... 355
Hyosciamus. effect of alkalies on... 399
Hysteria, remarkable case of...... 28

Idiots, on training of......... ... 148
Infantile pathology, works on.. . 108
Infantile paralysis, nature of...... 117
Infantile pathology, annual of..... 128
Intestines, fistula of umbilicus..... 388
Iodine, injection into uterus....... 331
Iron, Monsel's persulphate......... 148
Isaacs' report of surgical cases..... 32
Isham, uræmia after scarlatina..... 420

Jacobi, review of works by........ 108
Jaw, exsection of lower.... ... 32, 84
Johnson, hospital reports...... 95, 388
Johnson, fistula of intestines...... 388
Jour. of Royal Ophthalmic Hosp.. 279

Keratitis, remarks on........ ... 194
Kirkland, Thomas, letter from..... 328
Knee, cases of excision of......... 401
Knee, loose cartilage in.......... 14
Knee-joint, puncture of........... 387
Knee-joint, sub-luxation.......... 393
Krakowitzer, abscess of brain..... 247

Lallemand on spermatorrhœa...... 409
Laryngismus stridulus............ 111
Lawrence on surgical cancer...... 132
Lawson, statistical report......... 253
Lee on membrana decidua 400
Lente, menstruation in pregnancy.. 285
Lithotrity, removal of stone by.... 401
Lithotomy, high operation........ 217
Long Island College Hospital... 95, 388

Mackenzie, action of galvanism.... 400
Magendie, eulogy on............. 257
Magitot on human teeth.......... 113
Malgaigne, notice of, on fractures.. 408
Marcet, analysis of human feces... 400
Markoe, loose cartilage in knee.... 14
Markoe, exsection of caput femoris. 85
Markoe, on ununited fractures..... 371
Mayer, treatment of prolapsus uteri. 282
McCready, case of hæmaturia...... 24
Meacham, rupture of uterus....... 287
Med. and Surg. Society reports.... 9
Medicines, concentrated organic... 135
Meigs on diseases of children...... 125
Memoir of French Acad., review of. 256
Menstrua, retention from occlusion. 285
Menstruation during pregnancy.... 285
Menstruation, case of vicarious.... 281
Metcalfe, case of puerperal fever... 27

PAGE

Meyer on worm diseases.......... 125
Monsel's persulphate of iron...... 148
Moore, arterio-venous aneurism.... 398
Morris on scarlet fever........... 109
Mott pathological museum........ 278
Müller on rachitis 114
Murchison, etiology of fever...... 401
Murchison, gastro-cutaneous fistulæ. 398
Murchison, gastro-colic fistula..... 280
Muscles, division of...........102, 103

Nervous vertigo, its treatment..... 260
Neugebauer, morphology of funis.. 122
Noeggerath's rep. on Obstet.. 981, 137
Noeggerath, injections into uterus.. 331
N. Y. Eye Infirmary, report of..... 186
N. Y. Hospital, report of.. 83, 238, 385

Obstetrics, report on..........287, 137
Obstetrics, notice of Smith's....... 402
Ogle, effect of sympathetic nerve.. 401
Ophthalmic hospital report........ 279
Orbit, gun-shot wound of......... 88
Orchitis, compressed sponge in.... 323
Ovarian tumor, case of........... 31
Ovarian dropsy, cases of........ . 139
Oxygen in suffocation............ 422

Pachydermatocele, com'd sponge in. 326
Palsy, essay on wasting. 120
Paris, resort of students.......... 141
Parker, exsection of jaw.......... 84
Parker, case of emphysema....... 20
Parker, wound of scalp........... 16
Pathological Society, reports of. 247, 393
Pathological anatomy, notice of... 275
Peacock, malformation of heart.... 122
Perineal section cases........386, 389
Peters, case of tracheotomy....... 12
Pharmaceutical Assoc., proceed.... 135
Physic, Watson's practice of 277
Placenta, absorption of the....... 418
Pneumothorax, case of........... 20
Polypus, fibrous, of the bladder ... 401
Post, case of hemorrhage.. 29
Potass liq., effect on narcotics..... 399
Prescriptions, Amer. practitioners.. 135
Puerperal fever, case of.......... 26
Pustule, case of virulent..... 18
Pyæmia from uterine phlebitis..... 13

Quarantine Convention, meeting of. 425

Radcliffe on epilepsy............. 136
Registration in England.......... 149
Reid, notice of, on ventilation. ... 408
Report of Eye Infirmary...... 186, 358
Report on obstetrical science...... 281
Report Med. and Surg. Society.... 9
Report Brooklyn City Hospital ... 388
Report of hospitals and societies. 83, 238
Respiratory sounds, nature of..... 220

PAGE
Rice, trials of public benefactor.... 265
Ricord, notice of, on venereal..... 409
Roberts, on wasting palsy......... 120

Samson, ophthalmia in infants..... 123
Sanitary Association. N. Y......... 425
Sayre, treatment of varicocele..... 286
Scarburgh, retention of menstrua.. 285
Scarlatina, notice of Brown on.... 108
Scarlet fever, notice of Morris on.. 109
Scarlet fever, notice of Hood 111
Scirrhus of testicle, case.......... 34
Shoulders, stiffness of in chest dis...172
Shrady, hospital reports .. 85, 243, 385
Shrady, abscess of brain.......... 249
Silvester contribu'n on teratology.. 389
Simon, vesico-vaginal fistula. 139
Sims' anniversary discourse....... 278
Smart, case of premature puberty.. 401
Smith, dislocation of elbows....... 18
Smith, cases of cholera infantum... 61
Smith, experiments in asphyxia.... 422
Smith on inversion of uterus...... 400
Smith, notice of obstetric work ... 402
Spermatorrhœa, Lallemand on..... 409
Spine, treatment of curvature..... 145
Sponge, uses of compressed....... 311
Sponge, use of as a tent..... 312
Statistical report of army......... 253
St. Luke's Hospital, notice of..... 424
Stomach, glandular structures of... 401
Strabismus, three cases of. 358
Stramonium, effect of alkalies on... 399
Strict. of urethra, cases of. 240, 276, 388
Strictures, sponge tent in......... 311
Surgery, notice of Erichsen...... 276
Surgery, Carnochan's, work....... 277
Surgery, outlines of a course of.... 275
Symblepharon, operation for...... 358
Syphilis, Diday on............... 124

Teeth, on development of......... 113
Teratology. contribution to....... 389
Testicle, case of scirrhus..... .. . 34
Thigh, treatment of fractures of... 238
Thorax, penetrating wound of..... 91
Thompson, stricture of urethra.... 276
Thomas, report med. and surg. soc. 9
Thomas, essay on the hymen...... 196
Thudichum on the urine.......... 275
Thymus gland, physiology of...... 129
Tibia, case of hydatids of......... 401

PAGE
Transactions Medico-Chirurg Soc.. 398
Transactions Amer. Med. Assoc.... 274
Tracheotomy for œdema 9, 11
Tracheotomy for croup........... 12
Treatise on analysis of urine...... 275
Trephining for gun-shot wound.... 243
Trials of a public benefactor...... 265

Umbilicus, fistulous opening in ... 388
Uræmia after scarlatina........... 409
Uræmia, puerperal, cases of 28
Urethra, stricture of. ... 276, 280, 388
Urine, pathology of.............. 275
Uterus, inversion of reduced...... 281
Uterus, occlusion of.............. 282
Uterus, treatment of prolapse..282, 106
Uterus, treatment of neuralgia of.. 284
Uterus, rupture of........ ... 3[illegible], 287
Uterus, effect of galvanism on..... 410

Van Buren, operation for hernia .. 241
Van Buren, amputation of arm.... 242
Van Buren, case of tracheotomy... 9
Van Buren, case of hysteria. 28
Van Buren, dislocation of femur... 84
Varicocele, treatment of.. .... 87, 286
Vein, ligature of the temporal..... 388
Venereal. notice of Vidal on...... 410
Venereal. Ricord and Hunter on... 409
Ventilation, notice of Reid on. 408
Vertebra, frac.... 85, 87, 244, 245, 246
Vertebra, gunshot wound of...... 89
Vertigo, nervous, its treatment.... [illegible]
Vicarious menstruation, case of... 281
Vidal, notice of on venereal.. 410
Vogt, infantile paralysis.. 117

Warren, occlusion of uterus....... 282
Wasting palsy, essay on.......... 120
Watson's practice of physic....... 277
Watson, healing after amputation.. 18
Watson, virulent pustule.......... 18
Watson, puncture of knee..... .. 288
White, case of inverted uterus..... 281
Whitehead. transmission of diseases. 123
Wilson on spermatorrhœa..... ... 409
Wilson's system of anatomy 277
Wood. phlebitis in synovitis....... 15
Wood, case of pyæmia 15
Wood, curvature of spine......... 145
Wood, subluxation of knee........ 383

Zdzienski on encephalocele....... 126

COLUMBIA UNIVERSITY LIBRARIES

This book is due on the date indicated below, or at the expiration of a definite period after the date of borrowing, as provided by the rules of the Library or by special arrangement with the Librarian in charge.

DATE BORROWED	DATE DUE	DATE BORROWED	DATE DUE
C28(1141)M100			

COLUMBIA UNIVERSITY LIBRARIES
0062040693